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STUDY PROJECT

ARMY ACQUISITION MANAGEMENT
A QUEST FOR EXCELLENCE OR A TILTING OF WINDMILLS?

BY

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USAWC CLASS OF 1991

U.S. ARMY WAR COLLEGE, CARLISLE BARRACKS, PA 17013-5050

91

Unclassified
SECURITY CLASSIFICATION OF THIS PAGE

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1a. REPORT SECURITY CLASSIFICATION Unclassified	1b. RESTRICTIVE MARKINGS
2a. SECURITY CLASSIFICATION AUTHORITY	3. DISTRIBUTION/AVAILABILITY OF REPORT Approved for Public Release. Distribution is unlimited.
2b. DECLASSIFICATION/DOWNGRADING SCHEDULE	
4. PERFORMING ORGANIZATION REPORT NUMBER(S)	5. MONITORING ORGANIZATION REPORT NUMBER(S)
6a. NAME OF PERFORMING ORGANIZATION U.S. Army War College 6b. OFFICE SYMBOL (If applicable) AWCA	7a. NAME OF MONITORING ORGANIZATION
6c. ADDRESS (City, State, and ZIP Code) Carlisle Barracks, PA 17013	7b. ADDRESS (City, State, and ZIP Code)
8a. NAME OF FUNDING/SPONSORING ORGANIZATION 8b. OFFICE SYMBOL (If applicable)	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER
8c. ADDRESS (City, State, and ZIP Code)	10. SOURCE OF FUNDING NUMBERS PROGRAM ELEMENT NO. / PROJECT NO. / TASK NO. / WORK UNIT ACCESSION NO.

11. TITLE (Include Security Classification)
Army Acquisition Management: A Quest for Excellence or a Tilting of Windmills?

12. PERSONAL AUTHOR(S)
Mr. Henry I. Jehan, Jr.

13a. TYPE OF REPORT	13b. TIME COVERED	14. DATE OF REPORT (Year, Month, Day)	15. PAGE COUNT
Indiv. Study Project	FROM _____ TO _____	91/04/12	105

16. SUPPLEMENTARY NOTATION

17. COSATI CODES			18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)
FIELD	GROUP	SUB-GROUP	

19. ABSTRACT (Continue on reverse if necessary and identify by block number)

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This study examines one aspect of the Commission's report, Acquisition Organization and Procedures, and addresses how well the Army has implemented the spirit as well as the content of the recommendations. A structured questionnaire was sent to the 318 personnel who had served as Program/Project/Product Managers since the publication of the Packard Commission Report and were still employed by the government in November 1990. A total of 225 responded.

(continued on reverse)

20. DISTRIBUTION/AVAILABILITY OF ABSTRACT	21. ABSTRACT SECURITY CLASSIFICATION	
☒ UNCLASSIFIED/UNLIMITED ☐ SAME AS RPT. ☐ DTIC USERS	Unclassified	
22a. NAME OF RESPONSIBLE INDIVIDUAL COL John J. O'Connell, Jr.	22b. TELEPHONE (Include Area Code) 717-245-3404	22c. OFFICE SYMBOL AWCA

DD Form 1473, JUN 86 *Previous editions are obsolete.* SECURITY CLASSIFICATION OF THIS PAGE

Block 19 continued:

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USAWC MILITARY STUDIES PROGRAM PAPER

Army Acquisition Management
A Quest for Excellence or a Tilting of Windmills?

AN INDIVIDUAL STUDY PROJECT

by

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12 April 1991

ABSTRACT

AUTHOR: Henry I. Jehan, Jr.

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FORMAT: Individual Study Project

DATE: 12 April 1991 PAGES: 101 CLASSIFICATION: Unclassified

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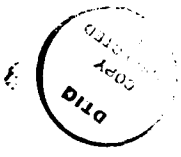

FIGURES

Introduction

It has been five years since the President's Blue Ribbon Commission on Defense Management, chaired by Mr. David Packard, published their final report to the President. Entitled *A Quest for Excellence*, their report was a comprehensive look at four aspects of the Department of Defense: national security planning and budgeting, military organization and command, acquisition organization and procedures, and government-industry accountability. The recommendations of the Packard Commission Report, as it is commonly called, were extensive and revolutionary. Subsequently, National Security Decision Directive (NSDD) 219, issued by President Reagan, directed their implementation. And, with minimal modification they were enacted into law with the passage of the Goldwater-Nichols Act in 1986. This paper addresses how well the Army has implemented one aspect of the Packard Commission Report, the recommendations addressing acquisition organization and procedures.

In response to NSDD 219 and the Goldwater-Nichols Act, the Office of the Secretary of Defense and the Services made major changes in their organizational structures and operational procedures. Specifically, in the area of defense

acquisition, the Services established a streamlined management structure. In the Army this resulted in a significant reorganization. Army acquisition program managers were designated as Program, Project, or Product Managers (PMs). A new reporting chain was established. The PMs were to report to Program Executive Officers (PEOs) who were to report directly to the Army Acquisition Executive (AAE). As a result, headquarters staffs were realigned throughout the Army acquisition community.

The central question this study attempts to answer is: how well has the Army implementation embodied the recommendations of the Packard Commission? Specifically, do the current Army management structures conform with the structures recommended by the Commission? And more importantly, does the Army acquisition process implement the spirit of the Commission's recommendations?

In the section of the Packard Commission Report which addresses acquisition organization and procedures, the Commission included what they called "An Acquisition Model To Emulate." The model was based on the premise that "...major savings are possible in the development of weapon systems if DoD broadly emulates the acquisition procedures used in outstanding commercial programs."[1] "To this end, [the Commission] analyzed a number of successful programs to identify management features that they had in common, and that

could be incorporated in the defense acquisition system. [The Commission] identified six underlying features that typified the most successful commercial programs:" "clear command channels;" "stability;" "limited reporting requirements;" "small, high quality staffs;" "communications with users;" and "prototyping and testing."[2] In addition to being a guide to the Services in implementing the recommendations of the Commission, this model serves as an excellent tool for measuring implementation.

Hypothesis

If the Army has captured the spirit, as well as the structure, of the Packard Commission Report in its implementation of NSDD 219 and the Goldwater-Nichols legislation, then there should be a high degree of conformity between the "Acquisition Model To Emulate" and the Army policies, procedures, and organizations as they are presently implemented.

Methodology

The methodology employed to test the hypothesis was to query the personnel who have served as Army PMs since the publication of the Packard Commission Report. This approach

created a particular challenge in identifying and locating all of the personnel who comprised the population of interest. With the help of the Army Acquisition Executive Support Agency in Alexandria, Virginia, the names were obtained for all of the persons who had served in PM positions between June, 1986 and November, 1990 (the then present date). A total of 501 personnel assignments were identified, of which 35 were reassignments of personnel between PM positions. This resulted in the identification of 466 individuals who had served as PMs. Of these, 106 were identified as having retired or otherwise separated from the Army, and another 39 were of unknown status or whereabouts.

The 106 PMs who had retired or otherwise separated from the Army are considered private citizens under the Paperwork Reduction Act of 1980. This law restricts government queries that seek responses from more than nine private citizens.[3] Because the process to obtain approval to conduct a survey of private citizens under the provisions of this law requires six to nine months, there was inadequate lead time to include this portion of the population in the survey. For this reason, the survey was limited to the 321 people identified as still employed by the government at the time the survey was conducted.

Because the population of PMs is both fairly large and geographically dispersed, a questionnaire was selected as the

preferred instrument for gathering the data required to test the hypothesis. A quantitative questionnaire with provisions for subjective comments, reproduced in Appendix II, was prepared as the survey instrument. It is structured in four parts. The first part focuses on demographic and control data. The second part assesses the respondents' knowledge of the Packard Commission Report. The third part addresses the six underlying features identified in the Packard Commission's "Acquisition Model To Emulate" and the relationship between cost, schedule and performance trade-offs. The fourth and final part asks the military respondents to provide data on the performance ratings they received while serving as PMs.

The questionnaires were sequentially numbered for control purposes and mailed to each of the 321 persons who could be legally approached. The mailing included a personally addressed and individually signed cover letter requesting participation, stating the purpose of the study, articulating the US Army War College nonattribution policy, and explaining the applicability of the nonattribution policy to this study. Additionally, each package contained a return addressed, postage paid, government reply envelope.

Of the 321 questionnaires mailed, nine were returned as undeliverable. Six were remailed after address corrections were made. Forwarding address were unavailable for three, which raised the number of PMs with unknown status or

whereabouts to 42 and reduced the sample surveyed to 318. Of the 318 questionnaires apparently delivered to their intended recipients, 225 responses were received.

Discussion and Analysis

As the questionnaires were received from the respondents, they were loaded into two dBASE III Plus[4] compatible data bases. The first, designated the "Q" data base, was keyed by questionnaire number and contained all of the quantitative responses to the survey instrument. The second, designated the "N" data base, was keyed by questionnaire and question numbers, and contained all of the narrative comments.

Quantitative analysis was performed by direct query and computation using the "Q" data base. Qualitative analysis was accomplished by sorting the "N" data base by question number and categorizing the narrative comments by the six underlying features defined in the Packard Commission Report. The quantitative data is synopsised in Appendix III. The qualitative data is quoted as appropriate throughout this report. Because the questionnaire and cover letter cited the U.S. Army War College nonattribution policy and promised anonymity to all respondents, all respondent comments are quoted throughout this paper without credit to the individual submitting the comment.

The cover letter transmitting the survey instrument, and the instructions on the first page of the questionnaire, indicated that the purpose of the study was to measure how well the Army had implemented the Packard Commission recommendations. However, several respondents indicated that they were not sure if their responses should reflect how things are, or how things should be. Because of these comments, one could conclude that, if the data is skewed, it represents an overstatement of the positive aspects of the Army implementation.

In the analysis process a special effort was made to determine if there was any relationship between the demographics of the responding sample and the responses to the questions in parts two and three of the questionnaire. The analysis looked at the demographic variables singularly and in combination. No relationships were found and no particular level of agreement or disagreement could be attributed to any demographically identifiable subgroup of PMs. As a result, it is concluded that both the quantitative and qualitative responses are representative of all sections of the PM community.

One potentially meaningful demographic factor was identified. A recurring theme in the respondent comments is that many factors are dependent on the personality of the

PEOs. This leads one to suspect that a relationship might be found if the data were categorized by PEO organization. To do this would be a difficult task because data identifying individual command structures was not collected. To perform such an analysis would require the researching of each questionnaire back to the organization of the respondent based on the system names reported. This was not done because of a lack of resources and the belief that any relationship found would not alter the conclusions of this study.

Population and Sample Demographics

The rank distribution of the respondent population appears to be representative of the sample population, which in turn appears to be representative of the total population of PMs who served during the period of interest. Figure 1 compares the distribution of ranks in the three populations. The percentage of military is larger in the sample than in the overall population because current employment status and addresses were unavailable for many civilians. Also, the ranks of the responding population reflect a greater number of Colonels because the figures for the total population were collected more than six momnths prior to the survey. The respondent population makes up more than 70 percent of the the sample population and approximately half of the total population, and the rank distributions are relatively

DISTRIBUTION OF RANKS WITHIN POPULATIONS

	Total Population	Population Surveyed	Population Responding
Military Rank - CPT	0.4%	0.3%	
MAJ	2.6%	3.1%	1.3%
LTC	34.3%	35.8%	35.1%
COL	36.5%	35.5%	41.8%
BG	3.4%	4.4%	4.0%
MG	1.1%	1.6%	3.1%
LTG	0.2%	0.3%	
UNKNOWN	0.2%		
Military Subtotal	78.8%	81.1%	85.3%
Civilian Subtotal	21.2%	18.9%	14.7%

Figure 1

consistent between the three populations. Therefore, there is every reason to believe that the respondent population is representative of the sample and total populations.

The questionnaire includes seven questions to quantify the experience of the respondents. These data provide interesting and insightful information about the respondents. But unlike the rank data, these data cannot be compared between the three populations because they are only available for the respondent population.

The first experience question was "when did you last serve as a PM?" Respondents currently in PM positions outnumbered all other respondents by approximately three to one. The numbers of PMs from previous years fall off almost geometrically with time. The previously cited restriction on questioning the retired population apparently skewed the population of respondents to the most current group. This, however, is a positive effect in the overall context of this study. Because the majority of the respondents are currently PMs, the results of the survey reflect current attitudes about the current implementation, and not a perception based on the initial implementation efforts.

The second experience question asks "how many times have you been a PM or Acting PM?" The results of this question were also geometrically distributed with first-time PMs outnumbering those with multiple assignments by about two to one. Figure 2 integrates the data from the first two experience questions.

The question, "how many OERs have you received as a PM," was intended to be both an internal consistency check on the performance rating question in section four of the questionnaire, and to provide a measure of how long the respondent had served as a PM. The question was flawed because it neglected to account for civilians who, of course, do not receive Officer Evaluation Reports (OERs). The

PM ASSIGNMENTS VS YEAR LAST SERVED

PM ASSIGNMENTS	YEAR LAST SERVED AS A PM 1986	1987	1988	1989	1990	PRESENT	TOTAL
ONE TIME	2	4	8	8	13	109	144
TWO TIMES		3	1	4	7	40	55
THREE TIMES		1		1	2	16	20
FOUR TIMES			1			4	5
FIVE OR MORE		1					1
TOTAL	2	9	10	13	22	169	225

Figure 2

civilians responded to the question in a variety of ways. Some entered numbers and identified them as civilian performance appraisals, some commented that civilians do not receive OERs, and others ignored the question. As a result, this data field was zeroed for all civilian respondents.

The military response to the experience question indicated a fairly uniform frequency across the number of years experience as a PM. This information, broken out by the

EXPERIENCE AS A PM

YEARS EXPERIENCE AS A PM	LAST YEAR SERVED AS A PM					
	1986	1987	1988	1989	1990	PRESENT
LESS THAN ONE						28
ONE YEAR		1		2		33
TWO YEARS		2	2	4	1	29
THREE YEARS		2	3	2	8	18
FOUR YEARS			1	2	4	12
FIVE OR MORE		2	2	2	8	23

YEARS EXPERIENCE AS A PM	NUMBER OF PM ASSIGNMENTS				
	ONE	TWO	THREE	FOUR	FIVE OR MORE
LESS THAN ONE	28				
ONE YEAR	35	1			
TWO YEARS	27	11			
THREE YEARS	21	11	1		
FOUR YEARS	6	10	3		
FIVE OR MORE	8	12	14	3	

DATA FOR MILITARY RESPONDENTS ONLY

Figure 3

last year the respondent served as a PM and by the number of times the individual served as a PM, is provided in figure 3.

The next three demographic questions addressed organizational issues. For each PM position held, the respondents were asked if they were assigned or acting, what category of PM they were, and under what organizational structure they reported. The assigned or acting question was intended to separate those permanently assigned/board designated from those filling-in in the absence of permanently

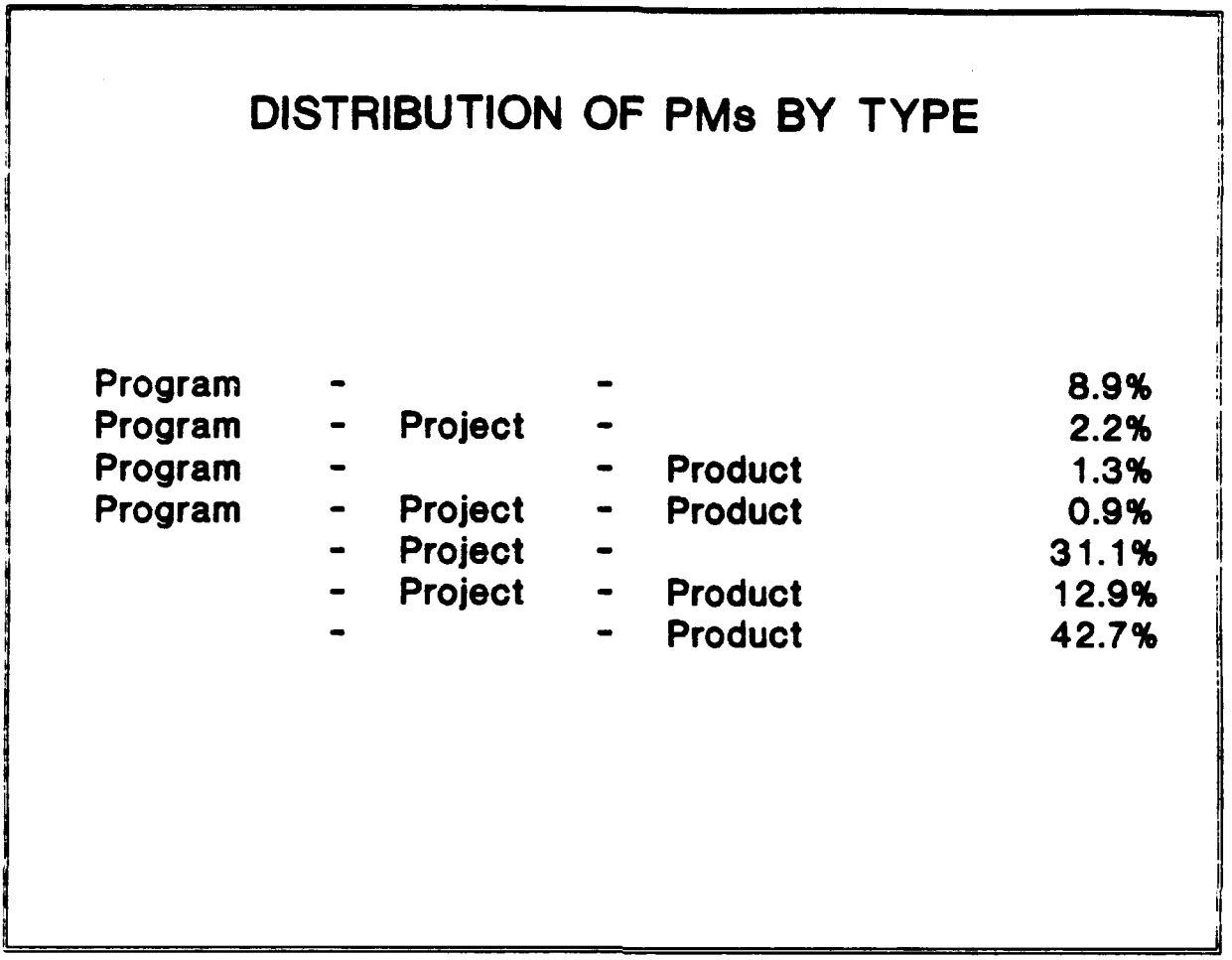

Figure 4

assigned personnel. It failed to do so reliably because as many respondents failed to respond to the question (17.8 percent) as indicated they had been acting PMs (17.3 percent).

The respondents who had served in only one PM position could be classified as either a program, project, or product manager. However, 17.3 percent of the respondents reported having held multiple PM assignments, most of which included assignments in more than one classification category. Figure 4 shows the distribution of respondents by PM type.

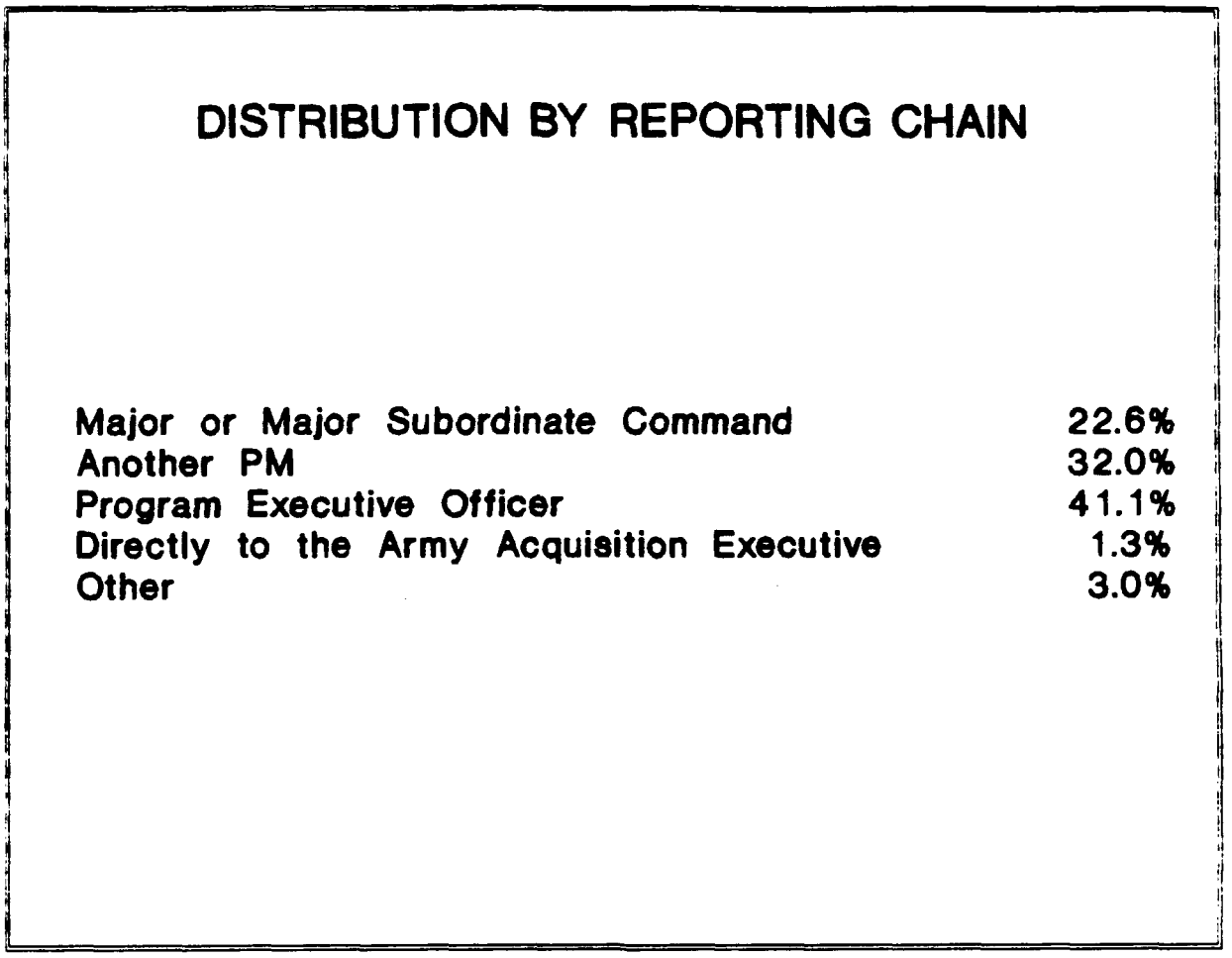

Figure 5

Figure 5 shows the distribution of respondents by reporting chain. The question, as it turned out, was incorrectly worded. Choice number one, which read "an AMC Major Subordinate Command," should have read "an Army Major or Major Subordinate Command." Because the respondents were liberal with their comments, many added an additional choice to identify their particular situation. These write-ins included Army Material Command (AMC), Information Systems Command (ISC), the Transportation Corps and the Defense Acquisition Executive. In the data reduction process, these

LIFE CYCLE PHASES MANAGED

LIFE CYCLE PHASE	PERCENT OF RESPONDENTS
Concept Exploration Definition - Milestones 0 to I	34.2%
Concept Demonstration Validation - Milestones I to II	50.2%
Full Scale Development - Milestones II to III	65.8%
Production/Deployment - Milestones III to IV	70.7%
Operational and Support - Milestones IV to V	44.4%

Totals exceed 100% because many PMs managed multiple Life Cycle Phases

Figure 6

write-ins were addressed and the categories expanded, as shown in figure 5, to include all responses.

The last demographic question stated "I managed the program during the following life cycle Phases (check all that apply)." Many respondents, 36.4 percent, answered this question more than once because they had served in more than one PM position. Others, 3.1 percent, failed to answer the question at all. Figure 6 shows the percentage of respondents who managed each phase. What the figure does not show are two

surprising observations about the data. First, 4.9 percent of the respondents indicated that, in a single PM assignment, they managed multiple, but discontinuous life cycle phases such as *Concept Demonstration Validation* and *Operational and Support*. Second, 15.1 percent indicated that they managed all five life cycle phases during their PM assignment. Some of the respondents commented on their management of all five life cycle phases, identifying their positions as *Basket PMs*, responsible for many small programs that spanned all phases of the acquisition cycle.

The Packard Commission Report

Part two of the questionnaire was designed to measure the respondent's familiarity with the Packard Commission Report. This portion of the questionnaire consisted of two questions. The first question asked how much of the report the respondents had read. The second question, addressing multiple issues, asked if the Packard Commission correctly identified the Army's deficiencies and if current Army policies and procedures corrected the deficiencies. It also provided space for narrative comments.

Although one respondent said "I've never met anyone who has actually read the Packard Report, we all know of it and I suspect only know what the newspapers and magazines have

HOW MUCH OF THE REPORT DID YOU READ?

QUESTION:

How much of the Packard Commission Report, A Quest for Excellence, Final Report to the President by the President's Blue Ribbon Commission on Defense Management, have you read?

RESPONSES:

The entire report	32.6%
Excerpts from the report	51.3%
Commentary about the report, but not the report	11.2%
None of the above	4.9%

Figure 7

reported," this position was very much in the minority. Overall, as shown in figure 7, the respondents were well versed in the report with almost 84 percent indicating they had read all or part of it.

Figure 8 presents the responses to the question on whether or not the Packard Commission correctly identified the Army's deficiencies. Figure 9 summarizes the responses to the question addressing whether or not the Army policies and procedures effectively correct the deficiencies identified by

DID THE COMMISSION IDENTIFY THE PROBLEM?

QUESTION:
Did the Packard Commission Report correctly identify the Army's deficiencies in system acquisition and development?

RESPONSES:	All Respondents	Providing Comments*
Not at all	0.9%	1.4%
To some degree	28.9%	26.1%
To a large degree	61.9%	69.6%
Completely	0.5%	0.7%
Don't know/not familiar with the report	7.8%	2.2%

* Totals to percent of respondents providing comments, not 100%.

Figure 8

the Commission. Both charts provide a side-by-side comparison of the responses for all respondents and the responses for those respondents who provided narrative explanation. There was little difference between the two groups, from which we must conclude that the narrative comments are representative of the population of respondents.

A total of 135 respondents provided narrative explanation for their answers. For the most part, the explanations address specific policies and procedures that are also

DID THE ARMY IMPLEMENT THE SOLUTION?

QUESTION:
Do the current Army policies and procedures for system acquisition and development effectively correct the deficiencies identified by the Packard Commission?

RESPONSES:	All Respondents	Respondents Providing Comments*
Not at all	4.1%	5.1%
To some degree	57.6%	67.2%
To a large degree	29.5%	25.5%
Completely	0.5%	0 %
Don't know/not familiar with the report	8.3%	2.2%

* Totals to percent of respondents providing comments, not 100%.

Figure 9

addressed in part three of the questionnaire. The analysis of the narrative responses addressing specific questions in part three of the questionnaire are omitted from this section and included in the analysis of the part three questions. The remainder of the comments, which made general statements about the Packard Commission Report and the subsequent Army implementation, are addressed below.

Only one, out of 218 responses, indicated that the Packard Commission Report completely identified the Army's

deficiencies in systems acquisition. Most respondents indicated that the Army's deficiencies were correctly identified only *to a large degree.* However, nearly thirty percent responded *to some degree.* One respondent summed up the concerns of the skeptics.

> "The Packard Report was conducted in a partial vacuum where the *reality* of Resourcing/Budget constraints, and the typical approach to encourage the buying-in by contractors was not given adequate attention. My observations are that the commission made too many assumptions, i.e., the predictability of the acquisition world."

The responses to whether or not current Army policies and procedures effectively correct the deficiencies were less positive. Most responded *to some degree.* Nearly thirty percent responded *to a large degree.* Again, only one out of the 217 responding to the question indicated *completely* (this was a different individual than the one responding with *completely* for the previous question).

The following comments by three separate individuals summarize the general feeling of most respondents. Some felt the Army was moving in the right direction:

> "Full impact of OSD and Army level changes in response to the report is not yet known. It does appear that DoD/Army are moving in the right direction with regard to the acquisition system."

But, others were not so sure the Army is committed to meaningful change.

"Initial policies did not fully address all problem areas/recommendations. Recent changes in law and the DMR have increased pressures to change the Army policies and procedures. The changes are in a very fluid state and are still being finalized."

"The Army's approach has focused on organizations and structures, not the process. Personnel reforms are questionable -- strictly due to a genuine lack of commitment."

Implementation of the "Acquisition Model to Emulate"

The Packard Commission's "Acquisition Model to Emulate" identified six underlying features that typified the most successful commercial programs. The first of these is **Clear Command Channels**. The commission elaborated on this feature with the following description:

> "A commercial program manager has clear responsibility for his program, and a short, unambiguous chain of command to his chief executive officer (CEO), group general manager, or some comparable decision-maker. Corporate interest groups, wishing to influence program actions, must persuade the responsible program manager, who may accept or reject their proposals. Major unresolved issues are referred to the CEO, who has clear authority to resolve any conflicts." [5]

Survey questions 3-1 through 3-5 were structured to measure the Army's implementation of clear command channels as described above. Questions 3-1 and 3-2 specifically address the first sentence of the Packard Commission description. Questions 3-3 and 3-4 address the second sentence. And, question 3-5 addresses the last sentence. The questions and their responses are summarized in figure 10.

CLEAR COMMAND CHANNELS

	AGREE	DISAGREE
Army PMs have clear program responsibility.	87.3%	9.9%
Army PMs have an unambiguous chain of command.•	70.1%	27.1%
Army PMs may freely accept proposals presented by interest groups outside their chain of command.	48.7%	32.1%
Army PMs may freely reject proposals presented by interest groups outside their chain of command.	55.1%	29.4%
Army PEOs have clear authority to resolve conflicts.	73.7%	17.5%

• Question asked in reverse.

PERCENT AGREEING OR DISAGREEING THAT THE ARMY HAS IMPLEMENTED THE PACKARD COMMISSION RECOMMENDATIONS

(Totals do not add to 100% because neutral responses not shown.)

Figure 10

The quantitative data displayed in figure 10 appears to indicate that the PMs, for the most part, agree that the Army implementation provides them with the clear command channels described in the Packard Commission model. However, the narrative comments and an analysis of the chain of command structure, as recorded in the demographic data, do not fully support these conclusions. Consider the following dichotomous comments provided by two Colonels.

> "I am responsible and accountable. I report to no more than two people. I know who is in charge. I still do the same job and must keep the same people informed -- the mechanisms for communicating and

decision making have changed; the requirement to coordinate has not. Assuming quicker decisions are better ... The new way does provide for quicker decision making with less kibitzing..."

"The PM *reports* to everyone! PEO, PM, User, Contracting Activities, Engineering Activities, Budget Activities, Army staff, OSD staff, Congress and other services. Incredible amounts of time are spent trying to convince all of the above mentioned players that the decision that the PM wants to make is the right decision. My biggest problem was with the three and two star [level] at Army staff -- if I could (and I did on occasion) by-pass them and get to the senior political appointee -- I could get a decision within minutes. If I had to get a decision through the [Director of Information Systems for Command, Control, Communications and Computers] (DISC4) it would take months to get to the three and two star level. Even then, they delayed decisions by asking more questions, which would mean preparing studies and answers and running them back through the staff before I could get back in to see the generals. On every occasion, my original proposal was approved. It's the time required to validate that decision in everyone's mind that's not acceptable."

From reading these two typical comments, one might think that the survey contains populations from two distinct management structures. However, the published literature and presentations by senior Army personnel on the Army implementation of the Packard Commission Report, all profess that the Army established only one streamlined acquisition structure -- a structure based on the Packard Commission recommendations. Implementation of the Packard Commission recommendations was accomplished through National Security Decision Directive (NSDD) 219.

"NSDD 219 directed the Services to:

- Appoint full-time Service Acquisition Executives (SAE) to administer acquisition programs.

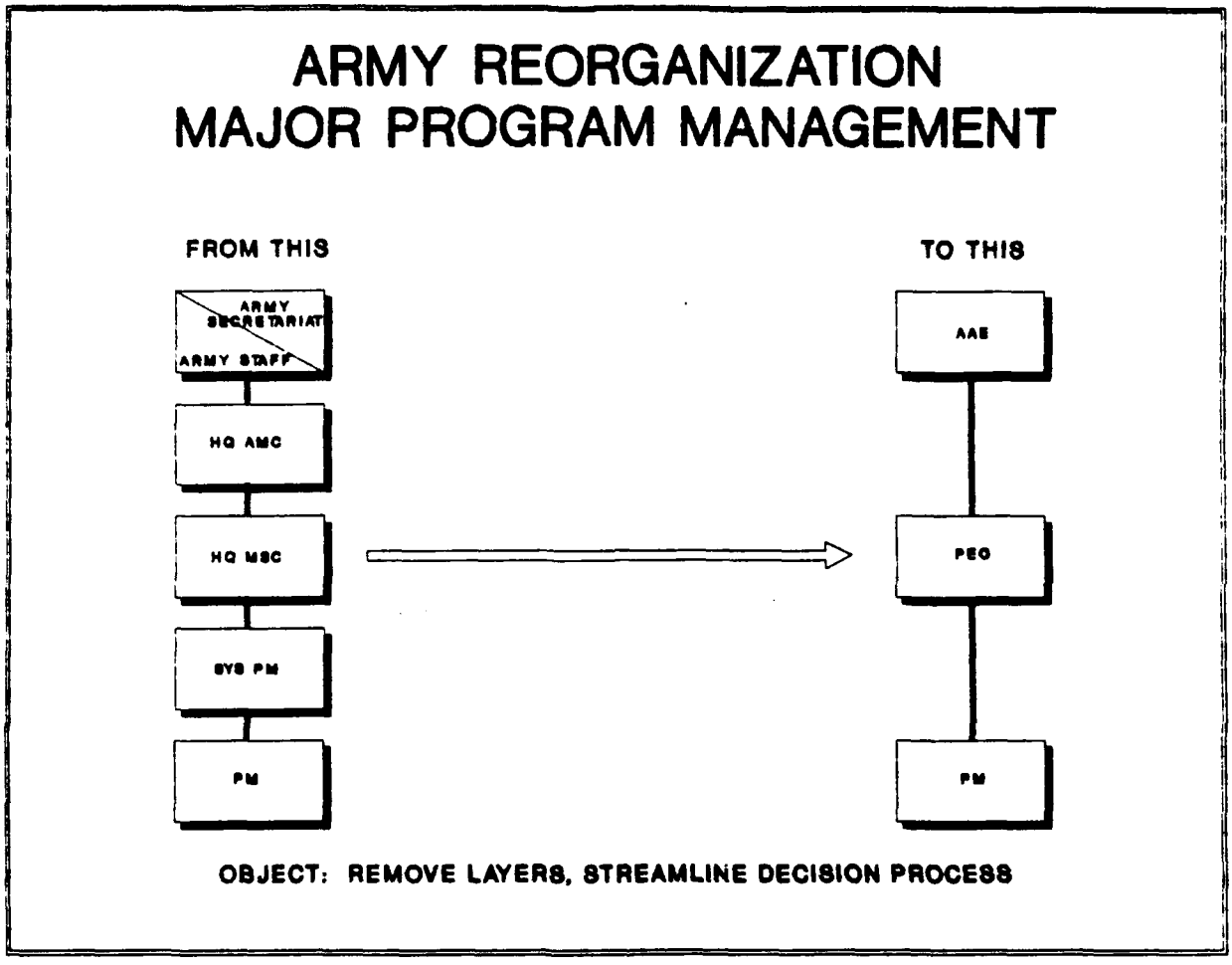

Figure 11

- Appoint Program Executive Officers (PEO) responsible for a defined reasonable number of programs.

- Direct that PM report on program matters directly to a PEO (or the SAE).

- Establish no more than one level of program supervision between a PM and the SAE, and not more than two levels between the PM and Defense Acquisition Executive (DAE)." [6]

As a result of this directive, the Army reorganized major program management, streamlining the old system into the three tier reporting chain as shown in figure 11.[7] The responsibilities of each management level in the new system

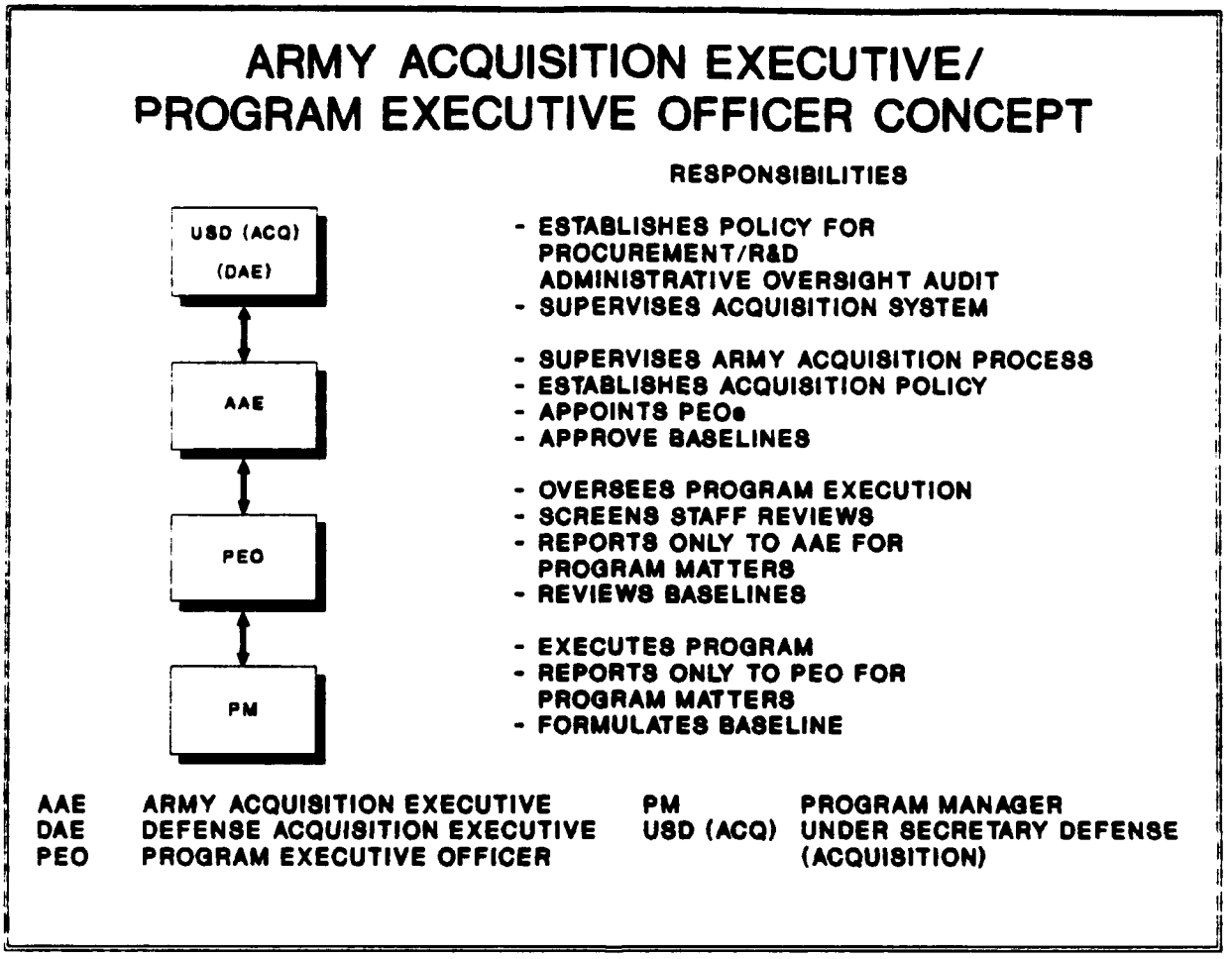

Figure 12

are defined in figure 12.[8] Within the Army, "all PM are program managers, but they are chartered as a Program Manager, a Project Manager, or a Product Manager based on the value and importance of the program they manage. The criteria established for designation of a Program Manager are generally the same as those which cause a system acquisition to be designated as a major program; high defense priority, high dollar value. or high Congressional or OSD interest. Program Managers report to a Program Executive Officer (PEO) and to the AAE...Project Managers report to a Program Manager or a

DISTRIBUTION BY PM TYPE AND REPORTING CHAIN

ALL RESPONDENTS CURRENTLY PMs	REPORTS TO				
	AAE	PEO	PM	ARMY COMMAND	OTHER
PROGRAM MANAGER	3	13	1	7	7
PROJECT MANAGER	0	79	8	33	1
PRODUCT MANAGER	1	30	86	27	1

ALL MILITARY RESPONDENTS CURRENTLY PMs WITH TWO OR FEWER OERS AS A PM	REPORTS TO				
	AAE	PEO	PM	ARMY COMMAND	OTHER
PROGRAM MANAGER	1	3	1	2	3
PROJECT MANAGER	0	23	2	13	1
PRODUCT MANAGER	0	13	40	11	0

SHADED CELLS IDENTIFY RELATIONSHIPS IDENTIFIED BY THE ARMY ACQUISITION EXECUTIVE/PROGRAM EXECUTIVE OFFICER CONCEPT

Figure 13

PEO. All Product Managers are assigned subprograms and work for a Project or Program Manager." [9]

If the Army is managing acquisition according to this doctrine, then the demographic data should identify all respondents as assigned and reporting within this structure. Figure 13 shows the distribution of all respondents by PM type and reporting chain. If all personnel were assigned according to the published doctrine, then all respondents should fall into the shaded boxes. However, this is not the case. Only

63.6 percent of the responding PMs fall into the categories defined by the three-tiered reporting chain described above; 36.4 percent of the Army PMs responding to the survey have a supervisory chain that is inconsistent with the Packard Commission recommendations, NSDD 219, and stated Army policy.

In defense of the Army, one might argue that the data is skewed because some of the PMs surveyed were in PM positions before the reorganization became effective. However, as the second chart in figure 13 shows, even if the sample is restricted to current military PMs with no more than two Officer Evaluation Reports (OERs), the results remain effectively unchanged.

Figure 14 illustrates the DA published operating concept for the PEO management system,[10] expanding on the system defined in figures 11 and 12. However, based on the data in figure 13, figure 14 fails to accurately define the current Army acquisition structure. The survey shows that there is not one structure, but several, as shown in figure 15. In addition to the expected structure of PMs reporting to PEOs, some PMs report to Army Major Commands, and some report directly to the AAE. Although the PEOs supposedly have direct access to the AAE, there are intermediate staffs which must be satisified. And, some of the PEOs are dual-hatted with reporting requirements outside the AAE chain of command.

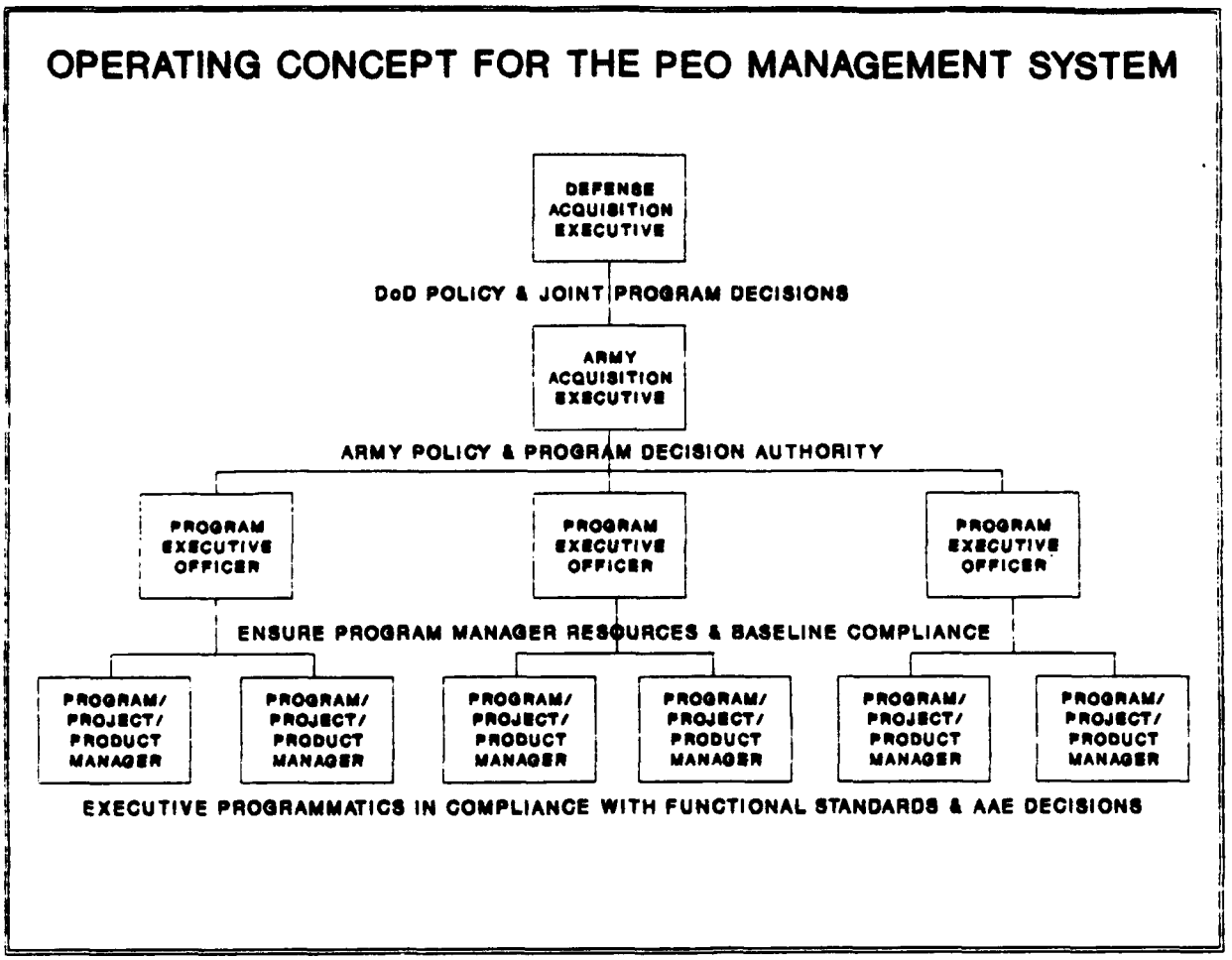

Figure 14

Under the Army implementation:

"The AAE is not an organizational position, but a title and responsibilities assigned to one of the [Secretary of the Army] (SA) staff. The Assistant Secretary of [Research Development and Acquisition] [ASA(RDA)] usually serves as the AAE and is also designated, pursuant to 41 United States Code Section 414(3), Senior Procurement Executive. The AAE exercises the powers and discharges the responsibilities set forth in *DoD Directives 4151.1 and 5000.1* for Service Acquisition Executives. When serving as the AAE, the ASA(RDA) is assisted by two senior military deputies (MILDEP), one for information system (IS) programs and one for weapons and support system programs.

The MILDEP for IS, (the Director of Information Systems for Command, Control, Communications, and

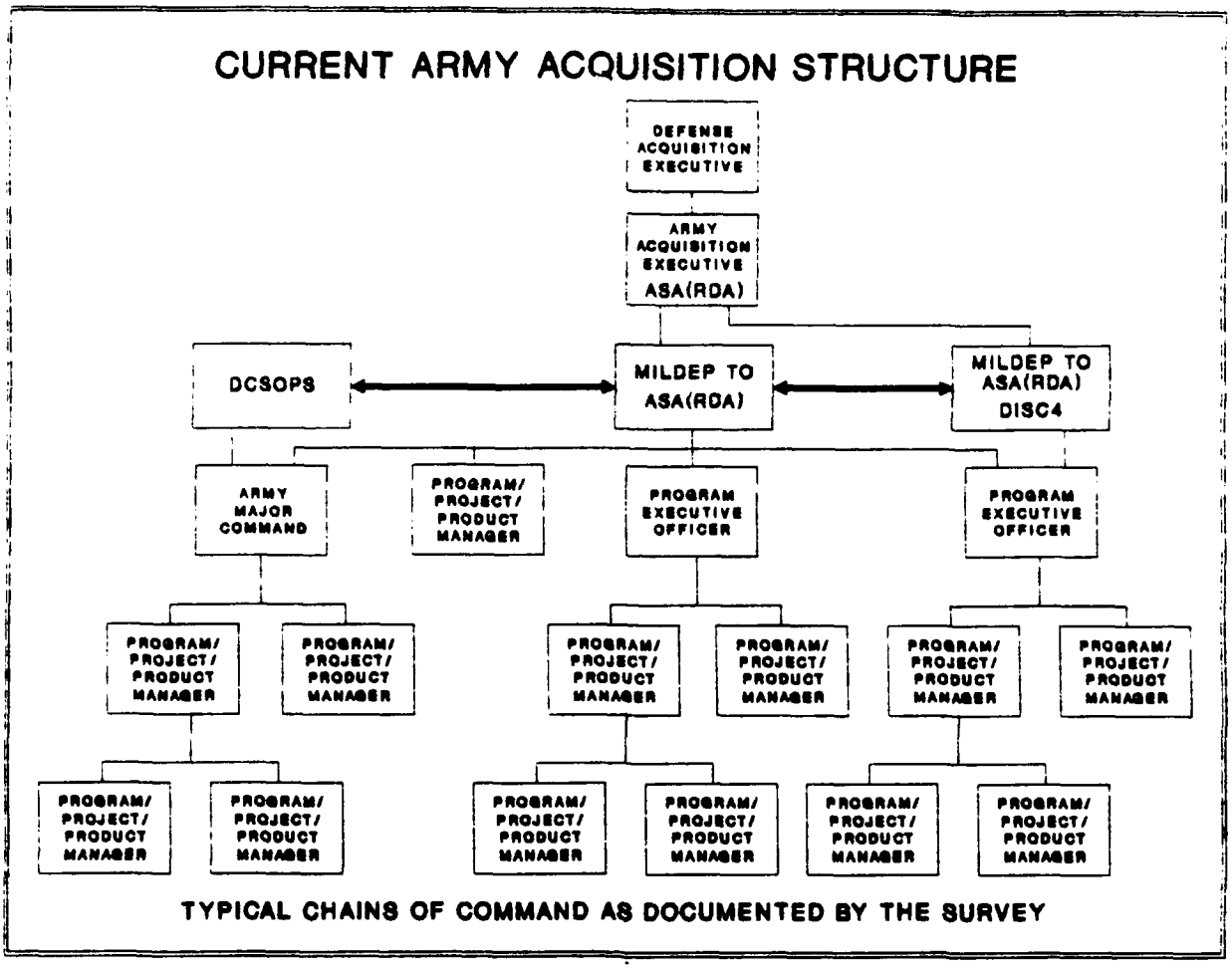

Figure 15

Computers [DISC4]), provides staff support to the AAE in managing the research, development, developmental test and evaluation, and acquisition of IS (includes automation, telecommunications, and command and control). The DISC4 also serves as the Senior Official for Information Resources Management (IRM). He works directly for the Secretary of the Army on all other aspects of IRM.

The MILDEP for weapons and support systems is assigned to the Office of the ASA(RDA) and provides staff support to the AAE in managing the research development, developmental test and evaluation, and the acquisition of materiel for all other Army systems." [11]

The old structure was not replaced with the new structure. Rather, the Army implementation added the new

structure to the old structure. What has been the impact?

Some of the PMs have described the environment this way:

> "Although the Packard Commission addressed many of the problems associated with Defense Acquisition, its implementation has left intact too many special interest groups which attempt to impede initiative. With notable exceptions, the acquisition process remains an uphill battle against a series of agencies with veto authority, but no real inclination to assist."
>
> "The [Packard Commission] Report envisioned a more *streamlined* process with fewer obstacles (regulations, policies, *rice bowls)* so that a PM/PEO could move quickly. To be sure, the chain of command is shorter but there are still many, many, impediments. DoD 5000-1 is still not published and the PM is still obligated to many requirements. Secondly, the dissolution of DCSRDA has created a problem -- without DASCs there is a gap between DCSOPS and SARDA."
>
> "There is still a level of arrangement in the Department (DISC4) which seems in contradiction to the Packard Commission. Their function is not clearly defined. There is a constant friction between DCSOPS and DISC4, keeping the PM in the middle and reducing the PEO's authority and ability to work the job. SARDA causes an additional reporting chain."
>
> "The organizational support base -- AMC -- has a virtual choke hold on what the PEO/PM may or may not do."
>
> "Perhaps deficiencies are corrected for PMs assigned within the PEO system but, for a PM assigned to an AMC MSC all the deficiencies identified by the Packard Commission exist -- in spades!"
>
> "We have product managers that are layered under three levels of chain of command, who can't be an honest broker to DA, because of AMC/MSC positions on programs. Even in PEO arena, some project managers are layered under capstone PMs who filter information."
>
> "...The old multi-layered organization still exists and continues to impede the management flexibility, responsiveness and authority of the PM. The PM/PEO must satisfy the *functional requirements* of the MSCs

MSCs in order to win their support at AAE level decision points. The MSC retains contract authority. In these, the MSC/AMC act in an advisory role. However, since the AMC Commander is also advising the AAE, the PM is compelled to take AMC's advice as direction. Then, the requirement to win a favorable decision through the AMC chain [is] remaining, and the PEO chain becomes a second chain of command."

"The deficiencies are all the same. Nothing has changed for the PM, because nothing changed at AMC HQ or HQDA. It was an exercise in redrawing organization charts. No laws, policies, regulations, etc. were changed that would affect business. It was all organizational. Until they change, we cannot."

However, all the comments are not negative. Some do see the current environment as an improvement over the past.

"The major improvement in Army acquisition provided by the Packard Commission was a more direct access to decision makers. Although the PEO system has major shortcomings (inadequate staff, little funding authority), it does allow streamlined authority from the AAE."

"The restructuring of organizations under the PEO concept has done a lot to remove bureaucratic red tape and layers of unnecessary supervision from DA level down to the PM."

"The PM is no longer buried in the subordinate command layering. Problems can be surfaced quickly to decision makers, who can hopefully provide a decision."

The second underlying feature identified by the Packard Commission's model is **stability.** The Commission described stability as follows:

"At the outset of a commercial program, a program manager enters into a fundamental agreement or 'contract' with his CEO on specifics of performance, schedule, and cost. So long as a program manager lives by this contract, his CEO provides strong

> management support throughout the life of of the program. This gives a program manager maximum incentive to make realistic estimates, and maximum support in achieving them. In turn, a CEO does not authorize full-scale development for a program until his board of directors is solidly behind it, prepared to fund the program fully and let the CEO run it within the agreed-to funding." [12]

The concept of program stability was addressed in the survey instrument in three separate sets of questions. Questions 3-6 and 3-7 measured agreement with the Packard Commission description above. These questions and their responses are summarized in figure 16. Questions 3-19 to 3-21 were specifically worded to address the trade-offs between cost, schedule and performance. These questions and their responses are provided at figure 17. The last section of the questionnaire, question 4, attempted to measure the relationship between PM performance and management support by collecting information from the respondents' OERs.

Figure 16 indicates substantial agreement with concept of the *contract* as expressed by the Packard Commission. The supporting narrative data shows that most respondents agree that at the outset of the program the PM does enter into a *contract* with the PEO on the specifics of system performance, schedule and cost. It also shows that there is general agreement that if the PM lives by the *contract*, the PEO will give the PM strong support throughout the life of the program. However, the comments inspired by these two questions tend to temper the meaning of the empirical responses. Although more

STABILITY

	AGREE	DISAGREE
At the outset of the program, the PM does enter into an agreement or "contract" with the PEO on specifics of system performance, schedule and cost.	65.7%	17.3%
If the PM lives by the "contract", the PEO gives him strong management support throughout the life of the program.	61.7%	16.3%

PERCENT AGREEING OR DISAGREEING THAT THE ARMY HAS IMPLEMENTED THE PACKARD COMMISSION RECOMMENDATIONS

(Totals do not add to 100% because neutral responses not shown.)

Figure 16

than half indicated that the PM and PEO entered into a *contractual* arrangement at the outset of the program, there was great variation in what the *contractual* vehicle was. Examples included: the PM's Charter, the program base line, and the OER Support Form. Many respondents said that any *contractual* arrangement between the PM and PEO was meaningless. As one respondent put it:

> "The *contract* approach is a simplistic solution to a hard problem. Bottom line is that both the PM and the PEO continue to be pushed by external forces such as Congressional budget reductions, force structure changes, business conditions with

contractors, and impatient generals in the user community. Consequently the *contract* you agreed to on day one gets modified weekly if not daily."

Another respondent said: "the *contract* ends up being a *living* document." He went on to say:

"Even though the PM has a charter -- it is more or less a worthless document. The PM is still hostage to the ups and downs of the budget drill. This often makes it impossible to have a program plan with more than a two week half life. It is not that the money isn't available but rather each level in the PEO and Army staff fiddles with the numbers. The staffers even at the GS-11 and O4 level can derail a program for several months by requiring an ever increasing number of studies and reports many of which have no bearing on the program. In short, the charter gives the PM the authority to make decisions, but in fact almost anyone can stop or delay his ability to keep the program on track."

And, still another respondent put it this way:

"If the PM lives by the *contract* -- not a condition for PEO support -- too many variables impact performance of the baseline -- mostly DA and OSD funding decisions."

Approximately 50 percent of those making comments on the subject of stability indicated that funding instability was the major problem. One respondent spoke for all when he wrote:

"Today's PMs are judged on how much they can do with nothing. The PM may receive dollars to start with, develop a date to achieve his [full operating capability] (FOC), only to find out all of his [Other Procurement Army] (OPA) [funding] is gone and his [Operations and Maintenance] (O&M) dollars are cut to the bone. His mission is still to bring in the program on schedule and [within] dollars. An

impossible task. The PM then will lengthen the programed project dollars in the out years knowing that: (1) he will not be there to worry about them; or (2) the program is so stretched out he can rebaseline and start all over again."

These comments indicate that although the concepts of program baselines and PM-PEO contracts have been implemented as routine actions, they do not fulfill the spirit of the Packard Commission recommendation to stabilize programs. The Commission recommended that:

> "In connection with the decision to begin full-scale development of a major new program, the program manager should prepare a brief baseline agreement describing functional specifications, cost, schedule, and other factors critical to the program's success. This baseline agreement should be submitted, through the responsible Program Executive Officer and the Service Acquisition Executive, for approval by the Defense Acquisition Executive.
>
> Within the terms of this agreement, the program manager should have full authority to execute the program. He should be fully committed to abide by the program's specified baseline and, so long as he does so, the Defense and Service Acquisition Executives should support his program and permit him to manage it. This arrangement would provide much-needed program stability, which could be enhanced significantly if the program were approved for multi-year funding." [13]

As a second measure of program stability, the three questions summarized in figure 17 were included in the questionnaire to assess the relative importance of performance, schedule and cost in making programmatic decisions. As one might expect, cost and then performance out stripped schedule. Narrative comments addressing these three questions were provided by 63 separate respondents. The

PERFORMANCE, SCHEDULE AND COST TRADE-OFFS

	AGREE	DISAGREE
Meeting system performance requirements is the most important factor in making programmatic decisions.	53.4%	35.2%
Maintaining the program schedule is the most important factor in making programmatic decisions.	36.5%	45.8%
Staying within budget is the most important factor in making programmatic decisions.	57.8%	24.7%

PERCENT AGREEING OR DISAGREEING THAT THE ARMY HAS IMPLEMENTED THE PACKARD COMMISSION RECOMMENDATIONS

(Totals do not add to 100% because neutral responses not shown.)

Figure 17

comments addressed varied aspects of the performance, schedule and cost relationship, and were aptly summed up by the respondent who said: "All are important factors in making decisions. Their importance depends on the situation." Others went on to say that they must be balanced, but cost and budget seem to be the dominate players. Budget shortfalls stretch out the program, increase incremental costs, and cause suboptimization of performance.

Part four of the survey instrument, OER performance and

potential evaluations, was intended to amplify on the PM-PEO contract issue by allowing for the comparison of PM performance and program performance. The premise was that if PMs performed poorly or had problems living within their *contract*, they would have received lower performance ratings than those who were clearly successful. The premise proved to be faulty. Of the 160 respondents who had received OERs as a PM and elected to respond to the question, data was provided on 458 OERs. The only differences reported were the ratings given by the senior rater. Every PM responding to the question reported supervisory ratings of "Always Exceeds Requirements" and "Promote Ahead of Contemporaries" on every OER received as a PM. Senior rater information was available for 443 of the 458 OERs reported. Of these, 72.5 percent were rated as *top block* and 27.5 percent were rated *second block.* No senior rater evaluation lower than second block was reported. The only conclusion that can be drawn from this, is that there is no relationship between PM performance ratings and either the PM-PEO contract or the user's assessment of the acquired system.

Limited Reporting Requirements is the third underlying feature identified in the Packard Commission model. The Commission amplified the meaning of limited reporting requirements as follows:

LIMITED REPORTING REQUIREMENTS

	AGREE	DISAGREE
The PM's reporting requirements are only to his PEO.	22.5%	74.3%
The PM's reporting requirements are on a "management-by-exception" basis.	33.8%	53.0%

PERCENT AGREEING OR DISAGREEING THAT THE ARMY HAS IMPLEMENTED THE PACKARD COMMISSION RECOMMENDATIONS

(Totals do not add to 100% because neutral responses not shown.)

Figure 18

> "A commercial program manager reports only to his CEO. Typically, he does so on a *management-by-exception* basis, focusing on deviations from plan." [14]

Question 3-8 addressed the first point in the Packard Commission amplification, which states that reporting requirements are only to the PEO. Question 3-9 addressed the second point, management-by-exception. The two questions and their quantitative responses are summarized in figure 18. The responses, both quantitative and qualitative, reflect

overwhelming disagreement between the Army implementation and the Packard Commission model.

As one respondent put it, "The PM *reports* to everyone!" The list is long; extracting from respondent comments, it includes the "PEO, PM, User, Contracting Activities, Engineering Activities, Budget Activities, Army staff, OSD staff, Congress and other services." To that "add: Congressional Staff (HAC, SAC, HSCI, SSCI), DCSOPS, DCSINT (in my case), DISC4, USAICS (in my case), SARDA, Joint Staff (in my case), GAO, Senate S&I, AAA, [and] journalists." Not to mention "to AMC, to OTEA, [and] to anyone that writes a bitch letter." The entire list does not apply to every PM. But, every PM reports to the majority of the individuals and activities listed, and, in many cases, to individuals and activities not listed above. A respondent summed up the situation this way:

> "Incredible amounts of time are spent trying to convince all of the above mentioned players that the decision that the PM wants to make is the right decision."

There is very little data available on just how many briefings were required to obtain milestone approval under the old acquisition management system. One frequently hears numbers in the forties quoted in conversation. The Government Accounting Office documented 42 briefings by the Air Force C-17 program, in a one year period from September 1987 through August 1988.[15] This time period was prior to the Air Force

implementation of the new acquisition management structure, and therefore supports the frequently quoted numbers. However, these numbers can not be documented for Army programs.

Those, citing the numbers of briefings required to obtain milestone approvals under the old acquisition system, do so only to support the implication that the process has been streamlined. This may be true in some cases, but the survey does not support the implication. To quote one respondent,

> "We've cut a lot of the repetitive briefings and *touch-all-the-bases* stuff out of the acquisition process. Internal to the Army, that is. Unfortunately, the OSD and the Congressional oversight is still far too intense."

Another respondent described the "Streamlined Reporting Chain [as being] in name only. [The] former chain [was] simply replaced by different players. [The] process from ASARC through DAB took up to 74 different briefings -- by all levels of PMO/PEO." And, still others said:

> "PEO is only true *reporting requirement* in the military sense, however, there are a number of other agencies which must be satisfied if the program is to move forward. Everyone involved gets a no vote -- only the PM can move through the redtape."
>
> "PM's are still required to submit volumes of reports, especially in the financial cases that are routine."
>
> "It sometimes seems that PMs report to everybody/anybody."

The fourth underlying feature identified by the Packard Commission is **small, high quality staffs.** The Commission described these staffs as follows:

> "Generally, commercial program management staffs are much smaller than in typical defense programs, but personnel are hand-selected by the program manager and are of very high quality. Program staff spend their time managing the program, not selling or defending it." [16]

Four questions in the survey, numbers 3-10 through 3-13, addressed the issues of small, high quality staffs. These questions and their responses are shown in figure 19. The responses were mixed as shown in the figure. A majority of the PMs saw their staffs functioning consistently with the model and spending their time managing the program. On the other hand, there was significant disagreement with the model when it came to selecting the staff, and the selling and defending of the program.

The following comments from various respondents capture the essence of the staffing issues.

> "Much of the PM's staff is inherited and he has little to say about it."
>
> "I chose my core staff (very small number). I have little control over matrix staff (large number)."
>
> "Matrix management does not support the responsibility/authority supposedly placed on a PM. PM's do not evaluate/rate the key or subordinate support personnel that work on their program. PM's have little control over the daily activities of the matrix support personnel because those people are rated/assigned/directed by other organizations or commands. A PM must negotiate (without the authority to enforce) the efforts of those who are

SMALL, HIGH QUALITY STAFFS

	AGREE	DISAGREE
The PM has complete authority in selecting his staff.	31.0%	60.5%
The PM's staff spends their time managing the program.	65.8%	30.2%
The PM's staff does not spend their time selling the program.*	31.1%	50.9%
The PM's staff does not spend their time defending the program.*	5.5%	87.4%

* Question asked in reverse.

PERCENT AGREEING OR DISAGREEING THAT THE ARMY HAS IMPLEMENTED THE PACKARD COMMISSION RECOMMENDATIONS

(Totals do not add to 100% because neutral responses not shown.)

Figure 19

key the system's progress. Often, time better spent on managerial oversight, is spent negotiating"

"The PM and PEO are bound by local CPOs (controlled by MSC CGs) and often do not have the latitude to bring on-board the best qualified personnel. Also, cannot get rid of proven *duds* due to local AMC/MSC restrictions."

Significant changes are currently being implemented to resolve many of the staffing issues. The Army program for Management to Civilian Budget (MCB) should resolve many aspects of the matrix support problem by giving the PM financial control over support personnel. Also, the Army

Acquisition Corps should correct many of the personnel policy and training problems.

Although the questionnaire did not address the Army Acquisition Corps, the subject was clearly on the mind of the respondents. Many comments touched on the subject. Most were apprehensive, but none were truly negative. The civilian respondents did not feel that they understood how the Corps was to be implemented. The military respondents feared that the officers in the Acquisition Corps would be too removed from the *muddy boot* Army. The following quote is typical of the military respondent's concerns.

> "The Army's approach to the Uniformed Acquisition Corps will eventually take the soldier experience out of PM offices by creating uniformed civilians. There's no need to waste good soldier spaces in the Army on these people. Might just as well civilianize the positions and give the spaces back to the real Army."

The subject of selling and defending the program generated a variety of comments. Some felt it is the PM's job to sell and defend the program, others felt it was the job of the PM's staff. It was an extremely small minority who recognized in their comments that the Packard Commission never intended for the PM to either sell or defend the program. The following are typical of the comments received on selling and defending the program.

> "Most of PM staff's time is spent selling/defending programs to DoD, DA and Congress - not even a yearly event but daily!"

"PM's staff shifts from selling, defending to managing and back rapidly over the life of the program. Personnel turnover on small, or non-central projects in PMO, AMC, TRADOC, etc results in continual need to resell/defend mission and approach to maintain consensus."

"I spend most of my time selling/defending the program while my folks end up doing a lot of the management chores."

"The PM becomes the proponent/advocate for his system -- this is improper. The user should push the system -- the PM should try to remain objective."

"When something is going badly, the PM must be able to sell his program and be an avid advocate. This is OK. However, the user, troop units and TRADOC schools, should be the sellers of the program. If they don't want it, I shouldn't want it."

The fifth underlying feature defined by the Packard Commission is, **communications with users.** The Commission defined communications with users as follows.

"A commercial program manager establishes a dialogue with the customer, or user, at the conception of the program when the initial trade-offs are made, and maintains that communication throughout the program. Generally, when developmental problems arise, performance trade-offs are made -- with the user's concurrence -- in order to protect cost and schedule. As a result, a program manager is motivated to seek out and address problems, rather than hide them." [17]

Questions 3-14 through 3-17 measured agreement or disagreement with the Army implementation of communications with users. This was one of the two underlying features in which the respondents indicated total agreement between the Army implementation and the model. The questions and

COMMUNICATION WITH USERS

	AGREE	DISAGREE
The PM always establishes a dialogue with the customer or user at the conception of the program.	85.1%	10.4%
The PM maintains communication with the customer or user throughout the program.	96.8%	2.2%
When developmental problems arise, performance trade-offs are made with the user's concurrence.	81.7%	8.2%
The PM is motivated to seek out and address problems, rather than hide them.	77.1%	14.4%

PERCENT AGREEING OR DISAGREEING THAT THE ARMY HAS IMPLEMENTED THE PACKARD COMMISSION RECOMMENDATIONS

(Totals do not add to 100% because neutral responses not shown.)

Figure 20

responses are displayed in figure 20. In all cases more than 75 percent of the respondents answered with agreement. And, in the case of question 3-15, which stated "the PM maintains communication with the customer or user throughout the program," more than 96 percent of the responses indicated agreement.

The majority of the respondent comments supported the existence of good dialogue between the user and the PM, while only a few related individual negative experiences. However,

most important were the comments on requirements and their establishment by the user. The respondents summed up the key issues when they wrote:

> "I am not aware of any policy or procedure that addresses the pitfalls identified by the Packard Commission concerning the *user push* or *technology pull* methods of establishing military requirements. Consequently, programs seem to continue to suffer from overstated requirements and understated costs. Also, the *huckster psychology* seems to be as common as ever due to the constant selling and/or defending of one's program."
>
> "[The] Army system still has great difficulty in sorting out what *user-wants* vice what *user-needs*."
>
> "Who represents Users? Often User ideas between commands conflict. With chain of command in PEO structure there is no clear chain in user community. While this chain does end at DA functional proponent, a majority of issues cannot go to three star level on recurring basis and one and two star users in the field go directly to O5 PM to try to influence the program in their direction. PEO is not suited to resolve their conflicts. Concurrence among all users -- defined as field organizations -- is impossible."
>
> "Relationship with TRADOC (who may or may not be a good user -- but is the voter) is very personality dependent. Despite all the hype -- I have never seen a really good [Required Operational Capability] (ROC) with bands of performance that provided meaningful trade-off capability."
>
> "TRADOC Schools and CAC change requirements too easily. Army four star level leadership pushes for new technology at the expense of PIPs to current systems."
>
> "User community is bankrupt as far as efficiency and quickly articulating a requirement...reaching consensus...getting formal approval...and remaining a firm proponent. The mean time between mind changes is very small."
>
> "If there is a strong user community (proponent school) and a continuous dialogue, the user sells the program and helps defend it, from a need

perspective. The PM can then devote his talent where it is best - managing to success."

"[But,] the *requirements* side of the acquisition process has still not been adequately addressed. It's just as bureaucratic as the material development process. How long does it take to get a [Required Operational Capability] (ROC), [Basis of Issie Plan] (BOIP), or [Operational and Organizational] (O&O) plan approved? Real streamlining if we combined the material and combat developer activities. As we sustain more and more budget cuts, we may be forced to take this kind of action."

The last of the six underlying features that typified the most successful commercial programs is **prototyping and testing**. The Commission described prototyping and testing as follows.

"In commercial programs, a system (or critical subsystem) involving unproven technology is realized in prototype hardware and tested under simulated operational conditions before final design approval or authorization for production. In many cases, a program manager establishes a *red team*, or devil's advocate, within the program office to work out pitfalls -- particularly those that might arise from operational problems, or from an unexpected response by a competitor. Prototyping, early operational testing, and red teaming are used in concert for the timely identification and correction of problems unforeseen at a program's start." [18]

Questions 3-18 and 3-22 addressed the Army's use of testing from the PM's perspective. Shown in figure 21, the quantitative responses to the questions on testing indicate a high agreement between the Army processes and the Packard Commission model. But, the narrative comments indicate the opposite. It appears that the PMs perceive two test communities. One, run by the developing contractors, supports

PROTOTYPING AND TESTING

	AGREE	DISAGREE
Prototype hardware of systems or subsystems involving unproven technology are tested under simulated operational conditions before final design approval or authorization for production.	74.1%	9.5%
Pre-production military testing is a valuable aid to ensuring a successful program.	87.7%	3.2%

PERCENT AGREEING OR DISAGREEING THAT THE ARMY HAS IMPLEMENTED THE PACKARD COMMISSION RECOMMENDATIONS

(Totals do not add to 100% because neutral responses not shown.)

Figure 21

the development and prototype efforts of the PM's program. A second one, run by the government, is also perceived by the PMs as valuable. But, it is often seen as a threat to their programs, seeking to test too much, and having too much power in the acquisition process.

The comments were emotional and highly critical as illustrated by the following examples:

> "Military testing! The government's T&E process is obsolete, redundant, costly in terms of dollars, time, and decisions. And its results are so

artificial that they may relate to subsequent field data. I am a strong proponent of testing-but smart not enforced. I believe our T&E program should be joint with the contractor; based upon the principles of CAIS, concurrent engineering, TQM, and implemented by a CAD, CAE, CAM. Test-fix-test should start at the lowest level, build incrementally in complexity. The T&E program test plan should be built jointly by the government and contractor, jointly approved and executed by the contractor, monitored by government T&E, and results jointly approved. Only true system-level final graduation testing should be conducted by the government in a TT/OT environment. All testing should use slots in simulation, stimulation, system integration labs, and other simulator/ gymnastaticator mechanisms (hot/cold shakers etc.) to get massive repetitions rapidly and thus minimize the empirical miles, hours, bullets approach which may not give a large enough statistical sample regardless of how much testing we do!"

"Testing community is out of control. Cost of operational testing in many instances far exceeds the value added to the objective system. An entire complex, nearly undecipherable artificial world has been constructed by the testers. No one but they understand the rules, the criteria, and the path through their labyrinth. The acquisition cycle can be greatly streamlined by putting a little common sense into this arena, vice the knee-jerk reactions caused by specific program disasters such as Sergeant York. Testing *confidence levels* are the buzz words that cause this dilemma...too many ORSAs!!"

"It takes two years to get to a DT. This assumption -- that early OT is good -- works in an NDI environment. But in an R&D situation-prototypes usually are not adequately mature to *operationally* test. Adding a second OT means it takes a minimum of four years plus test, plus evaluation, simply to get to a production-decision-and we've *streamlined* nothing."

"You must test in an *operational environment* sometime before you commence full rate production...the dilemma is how much is enough to give you confidence that you can: (a) live with the problem areas; and/or (b) have a fix which works...and (c) how much testing of the fix is prudent."

"One additional comment begs to be made. The independent testers do a disservice to their services by : 1) not thoroughly understanding the system under test, and 2) not insisting on a rigorous implementation of the approved threat. They too often are preoccupied with the *mechanics* of testing. If they fall into this trap, and they often do, it takes a great deal of effort to extract them so that the decision makers have *real* and *valid* data with which to act."

Summary

The survey paints a bleak picture of acquisition management in the Army. In many respects there is little difference between the Army acquisition process of today and that described as "Problems With the Present Acquisition System" in the Packard Commission Report.[19] The Packard Commission provided a model of successful industry project management, with the idea that government could adapt its policies to emulate the industrial procedures. What this study shows is that the Army has made an honest attempt to adopt these procedures, but it has not been fully successful. Some may argue that the Army can never be fully successful in implementing an industry like project management process because of the outside influences inherent to the Army environment. On the other hand, the industrial and military environments may be much more similar than many envision.

A Comparison to Industry

For the sake of argument, let us reverse the perspective of the Packard Commission and look at the industrial sector in terms of the Federal Government. How would industry look if it tried to develop new products using the Army's approach to project management?

If we begin our comparison at the top, can we not compare the voters to the corporate stockholders? Each holds a vested interest in the actions of the institution, but participates through representatives. In the Federal Government we call the representatives the Congress, while in the corporate world they are the board of directors. In both environments, the day to day operations of the organization are overseen by a chief executive, the President, and his staff. The Federal Government has Departmental and Service Secretaries. The corporation would have a vice president or other person with an equivalent title to oversee each operating division of the company. Within the DoD, there is an Acquisition Executive to oversee new products development and acquisition. Within the corporate operating division, there would be an executive responsible for new products development, who we will refer to as the New Products Development Executive (NPDE). The NPDE is actually a title given to a dual-hatted senior operating organization executive. Under the NPDE hat, the executive has several subordinate program teams headed by Program Executive

Officers. Similarly, because our corporate example is a large firm with many dissimilar operating divisions (banking, agri-products, aviation systems, etc.) and each has several new products in development, the NPDE will have several subordinate product teams.

Now, let us take our corporate example and place it in the government environment. To maintain a consistent frame of reference, we will address each of the six underlying features as defined in the Packard Commission Report.

Clear Command Channels. Our NPDE is a busy person with at least fourteen subordinate project officers and a corporate operations staff of more than one hundred reporting through nine subordinate supervisors. Some of the new projects staff are PMs. Some are PEOs, supervisors of PMs, with several PMs reporting to them. In a couple of cases, the subordinate PMs supervise an additional layer of subordinate PMs. Figure 22 provides an illustration of the typical structures in the organization. The PEOs are responsible for several different programs, all in different phases of their life cycle. Some are new teams just starting out on new projects, while others are old projects that are in production and not yet handed off to the production organizations. Additionally, the NPDE provides oversight and direction to new product development projects being conducted in several production organizations outside the direct chain of command.

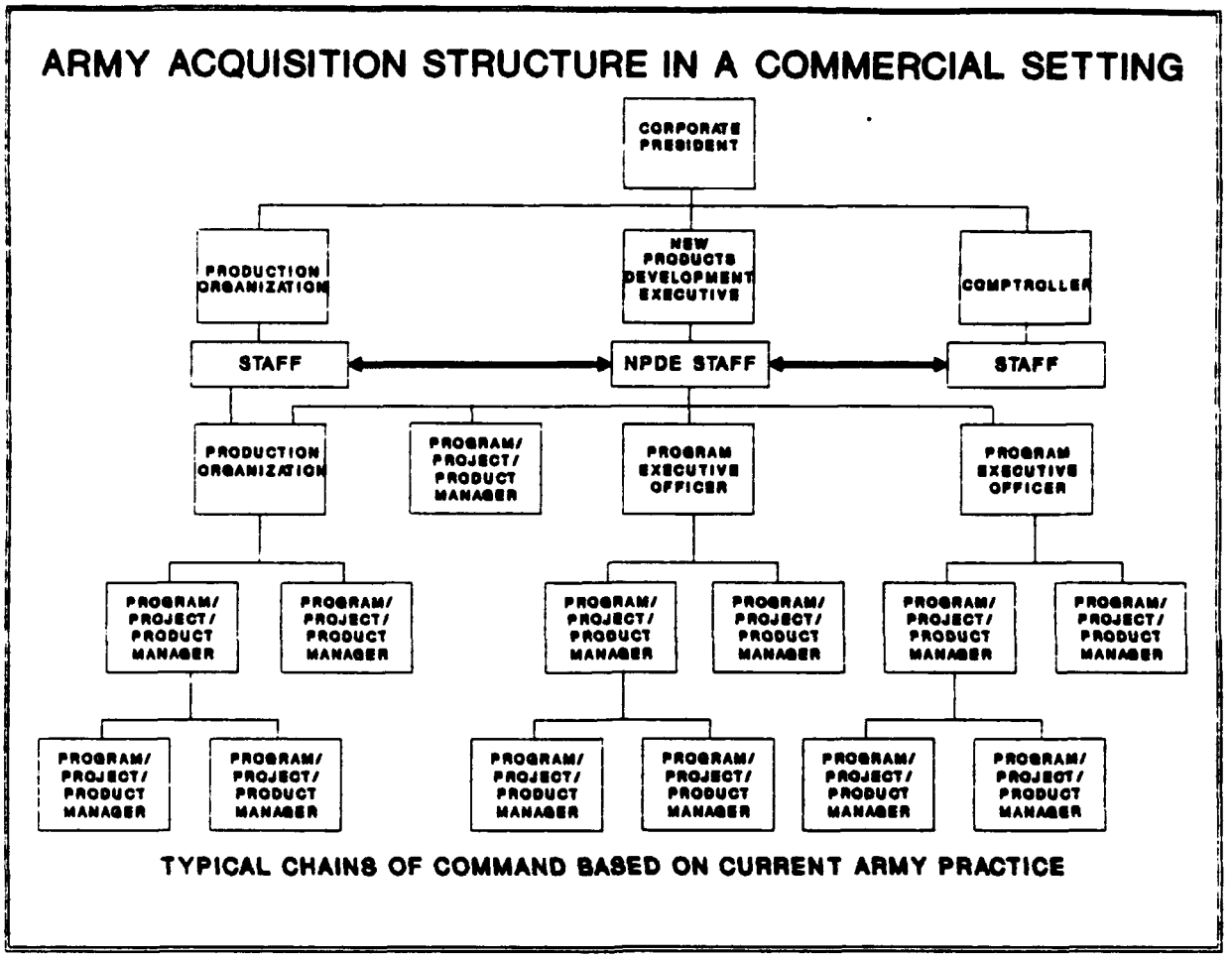

Figure 22

Within this structure, different PMs have different reporting paths to get their issues to the NPDE. Some must go through another PM to get to their PEO, some must go through supervisors outside the chain of command of the NPDE, while some have direct access. Because of the complexity of this structure and workload, an intermediate NPDE staff has been established to resolve as many issues as possible before the NPDE has to deal with them.

Stability. Each PM in the organization enters into a contract which identifies the resources required to develop the product, the schedule the development will follow, and the performance characteristics of the product. Contract in hand, the PMs head out to accomplish their objectives. After a short period of time, the PMs are advised by the corporation comptroller, an individual on equal footing with the NPDE, that their programs will be cut 10%. Each PM is offered the opportunity to submit a written reclama to stave off the cut, which must go through their chain of command. Some are successful, some are not. Those that are not must adjust their programs to meet the reduced funding.

In a subsequent exercise, several PMs are advised that the board of directors has particular interest in their projects and that they must brief the board as to why their program should be funded. They develop briefings, brief their chain of command up to the NPDE, on to a staff assistant to a board member, and eventually the board member. For some, word comes back that their program is terminated and even though it is three months into the year, all funds for that year are cut. As a result, the NPDE and the subordinate staff must steal the expended funds from another program. The adjustments are made, the PMs' contracts are revised, and the process is started anew.

Limited Reporting Requirements. Each PM is required to provide routine reports on various aspects of the program to the supervisor, the corporate comptroller, the NPDE and NPDE staff, the assistants to several of the board members, and a variety of other organizational elements. Most of these reports are informational and have no bearing on current decision processes. Furthermore, every time a stockholder has an interest in the project, or disagrees with how it is being conducted, the query must be individually addressed and resolved.

Small, High Quality Staffs. Each PM's core staff is limited to the number of personnel approved by the manpower division working for the corporate comptroller. The PMs can only hire persons who are registered in the corporate computer system. Personnel not currently employed by the company can only register in the system during random time windows, and then only for specific positions if they meet the prescribed administrative criteria. Additionally, if a PM has a vacancy and a company employee's current position is abolished somewhere else in the company, that employee will be automatically placed in the PM's vacancy if the computer file shows that the employee meets the minimum requirements for the position.

The PM can augment the available staff with special skills by drawing personnel from other activities within the company.

However, if the PM does this, the PM must take the individual given by the loaning supervisor, the PM must pay the individual's salary out of the program budget, and the PM does not get supervisory control over the individual.

The PM's staff has three principal duties. They are to manage the program, to sell the marketing representatives on the need for the product, and to defend the program from attacks by the comptroller, the comptroller's staff, the board members, the board members' staffs, the stock holders, and the news media.

Communications With Users. The PM is responsible for establishing a dialogue with the customer or user. Because the user's point of contact and management will change several times during the development of the product, it is critical that the PM keep the customer or user informed and convinced as to why the product is needed and why the development has resulted in the trade-offs that were made.

Prototyping and Testing. Once prototype hardware can be built, the PM must submit it to a test. The test must be conducted in the environment in which the item will be utilized, using evaluation criteria developed from the input of the current customer or user representative rather than the requirements document the system was designed to meet. Furthermore, the system must perform at the same level as

would be expected after the production line has stabilized and all the bugs wrung out of the first production copies.

It is doubtful that any commercial organization could stay in business managing development with the organization described above. Yet, this is how we do business in the Army. The defense acquisition process is in the mess it is currently in because reform is compromised rather than implemented.

Conclusions and Recommendations

The central question this study has attempted to answer is: how well has the Army implementation embodied the recommendations of the Packard Commission? Specifically, do the Army management structures conform with the structures recommended by the Commission? And more importantly, does the Army acquisition process implement the spirit of the Commission's recommendations?

We must conclude that the Army has failed on both counts. Undoubtedly, what the Army has done is a valiant effort in acquisition reform and much progress has been made. However, the structure and the spirit of change have not transitioned from the pages of the Packard Commission Report to the procedures of the bureaucracy.

The structure and the spirit of the Packard Commission recommendations need to be implemented by the Army. Specifically, the following problems require attention:

- The Packard Commission proposed a single acquisition management structure with a short reporting chain. The Army did not uniformly implement the recommended structure. Rather it compromised the implementation, implementing the new structure without totally eliminating the old structure. As a result multiple structures exist throughout the Army. Because the old structure did not go away, it corrupted the new structure by adding organizations such as the DISC4.

- The Packard Commission recommended that the PM should have the authority to accept or reject the positions of the various interest groups within the Army and that the PEO should have clear authority to resolve conflicts. This is not the case. The PMs are politically whipped about by a variety of interest groups, both internal and external to the Army, all of which have the power to slow down or stop a program.

- The Packard Commission advocated program stability. It even recommended multi-year funding when possible. However, program stability is a joke. The PEO has little say over the programs managed because the Army

financial managers outside the chain of command have the authority to alter the funding of the programs, much as they see fit. Furthermore, Congressional micromanagement inhibits the PEO's ability to manage. The funds for all the programs under the management control of a PEO should be given to the PEO in a single account. The PEO should have the authority to freely manage and reprogram the funds so that optimal accomplishment of all programs/projects/products is achieved. The Congress should limit their participation in this process to authorizing or prohibiting an acquisition at the critical program junctures and providing funding to the group of programs managed by the PEO. The funding managed by the PEO should be protected or *fenced* from all operational accounts.

- The Packard Commission recommended streamlined reporting requirements utilizing *management-by-exception.* Under this concept, PMs should only report to their PEO. Requests by special interests should go through the PEO and all reports must be relevant to pending actions.

It may be true, as stated by several respondents, that the PEO staffs are not large enough to handle the volume of special interest requests. However, is that a valid reason to pass these tasks down to the PM and his staff? Does the PM exist to meet the needs of the many

special interests? Or, does the PM exist to acquire a needed system for the Army? If the answer is the second option, as we would hope it would be, then the Army should protect the PM from the burden of special interests requests.

In addition to the Packard Commission recommendations addressed above, the following recommendations are critical to the successful implementation of commercial good business practices in the Army acquisition programs.

- The ongoing effort to establish an acquisition corps should be continued. However, in doing this, the Army must ensure that its purpose is realized and not compromised by efforts to conform to the existing system. On the military side, the young officers must come to the acquisition corps branch-qualified and with relevant field experience. If this is not done, the Army will end up with a corps of *civilians in uniform* working side-by-side with their civilian counterparts.

  On the civilian side, the organization must be flexible enough to retain the achievers and eliminate the dead wood. The civilian implementation should be structured around two groups, an acquisition corps and a corps of acquisition corps candidates. New acquisition personnel should be identified as candidates and employed in

junior staff positions for several years. Only when they show ability and reach selected senior positions would they actually be designated as being in the corps. Furthermore, failure to progress as a corps candidate should be reason to eliminate them from the program. They should not have to leave Federal Service, but should be provided re-employment rights back to the general work force. However, the corps should be fenced from all stopper lists, bumping rights and similar actions. The only way into the corps should be through the candidate process. The candidate process should be liberal in its entrance requirements, providing a means for new talent to migrate to the corps. But it should be restrictive in its retention, providing a means to move out those who cannot *cut it*.

- The ongoing efforts to bring the PM shops under the Manage to Civilian Budget Program should be continued. Using this technique, and the new practice of having the PMs pay the salary of all matrix support assigned to them, should result in strong staffs focused on mission accomplishment.

- The PMs, the users and the testers must begin a meaningful dialogue at the conception of every program. The PMs need to view the testers as part of the matrix support for their effort, the users need to view the

testers as the honest brokers who will advise them exactly what the product they get will do, and the testers need to see themselves as players on the development, acquisition and fielding team. As long as testing is seen as *the last wicket to program completion*, rather than *the tool to demonstrate that performance criteria are met*, inefficiencies and animosities will continue.

- The entire requirements development process needs serious study and revision. Requirements should reflect what the war fighting CINCs need to win the next war. The requirements and the programs that fulfill them should be articulated by the combat developers and supported and defended by the war fighting CINCs. TRADOC, as the user representative, should take the lead in requirements articulation. The CINCs should stand up and support TRADOC in this effort. Not only should the PM not have to sell or defend the program, the PM should be prohibited from doing so. If the war fighters cannot sell and defend the program, then the Army should not be making the investment.

Appendix I

Glossary of Acronyms and Terms

Glossary of Acronyms and Terms

AAA	Army Audit Agency
AAC	Army Acquisition Corps
AAE	Army Acquisition Executive
AMC	Army Material Commamd
ASARC	Army Systems Acquisition Review Council
ASA(RDA)	Assistant Secretary of the Army (Research Development and Acquisition)
BOIP	Basis of Issue Plan
CAC	Combined Arms Center
CAD	computer aided design
CAE	computer aided engineering
CAIS	computer aided information system
CAM	computer aided manufacturing
CG	Commanding General
CINC	Commander in Chief
CPO	Civilian Personnel Office
CEO	Chief Executive Officer
DA	Department of the Army
DAB	Defense Acquisition Board
DAE	Defense Acquisition Executive
DASC	Department of Army Systems Coordinator
DCSINT	Deputy Chief of Staff for Intelligence
DCSOPS	Deputy Chief of Staff for Operations
DCSRDA	Deputy Chief of Staff for Research, Development and Acquisition

DISC4	Director of Information Systems for Command, Control, Communications, and Computers
DoD	Department of Defense
DMR	Defense Management Review
FOC	full operating capability
GAO	Government Accounting Office
HAC	House Appropriations Committee
HQDA	Headquarters, Department of the Army
HSCI	House Select Committee on Intellegence
IS	information system
IRM	information resources management
ISC	Information Systems Command
MILDEP	military deputy
MCB	Management to Civilian Budget
MSC	Major Subordinate Command
NDI	nondevelopmental item
NPDE	New Products Development Executive
NSDD	National Security Decision Directive
O&M	Operations and Maintenance
O&O	Operational and Organizational
OER	Officer Evaluation Report
OPA	Other Procurement Army
ORSA	Operastions Research, Systems Analysis
OSD	Office of the Secretary of Defense
OT	operational testing
OTEA	Operational Test and Evaluation Agency, renamed OTEC, Operational Test and Evaluation Command in Fiscal Year 1991.
PEO	Program Executive Officer

PM	Program, Project, or Product Manager
PMO	program management office
ROC	required operational capability
S&I	standardization and interoperability
SA	Secretary of the Army
SAC	Senate Appropriations Committee
SAE	Service Acquisition Executives
SARDA	Secretary of the Army for Research Development and Acquisition
SSCI	Senate Select Committee on Intelligence
T&E	test and evaluation
TT	technical testing
TQM	Total Quality Management
TRADOC	Training and Doctrine Command
USAISC	U.S. Army Information Systems Command

Appendix II

Survey Questionnaire

United States Army War College
Carlisle Barracks, Pennsylvania

MILITARY STUDIES PROJECT SURVEY QUESTIONNAIRE

The Army's Implementation of the Packard Commission Report

DATA REQUIRED BY THE PRIVACY ACT OF 1974

PRESCRIBING DIRECTIVE: AR 70-1

AUTHORITY: 10 USC 4503

PRINCIPAL PURPOSE: The data collected by this questionnaire are to be used for research purposes only.

ROUTINE USES: Full confidentiality of the responses will be maintained in the processing of these data.

MANDATORY OR VOLUNTARY DISCLOSURE AND EFFECT ON INDIVIDUAL NOT PROVIDING INFORMATION: Your participation in this research is strictly voluntary. Individuals are encouraged to provide complete and accurate information in the interests of the research, but there will be no effect on individuals for not providing all or any part of the information.

QUESTIONNAIRE INSTRUCTIONS

The purpose of this questionnaire is to gather data on how well the Army has implemented the recommendations of the Packard Commission Report. You have been selected to receive this questionnaire because you have served as a Program/Project/Product Manager (PM) since the Packard Commission Report was published in 1986.

- Please answer each of the questions on the following pages.

- Mark your answers directly on this questionnaire by placing an "X" over the number in the appropriate box or writing in your response in the space provided.

- When completed, please return the entire questionnaire in the pre-addressed government envelope provided.

- Thank you.

1-1. What is your current rank?

[1] CPT [2] MAJ [3] LTC [4] COL
[5] BG [6] MG [7] LTG [8] DAC

1-2. When did you last serve as a PM?

[1] 1986 [2] 1987 [3] 1988
[4] 1989 [5] 1990 [6] Present Position

1-3. How many times have you been a PM or acting PM? ___

1-4. How many OERs have you received as a PM? ___

1-5. For each time you served as a PM or acting PM, complete the following set of sub-questions. Enter the system name in the space provided. Place an "x" in the boxes next to the words or phrases that best complete each of the sentences.

1-5a. System Name:_____

I was [1] assigned as a [1] program manager.
[2] acting [2] project manager.
[3] product manager.

I reported to: [1] an AMC Major Subordinate Command.
[2] another PM.
[3] a Program Executive Officer.
[4] directly to the Army Acquisition Executive.

I managed the program during the following life cycle phases (Check all that apply):

[1] Concept Exploration Definition - Milestones 0 to I
[2] Concept Demonstration Validation - Milestones I to II
[3] Full Scale Development - Milestones II to III
[4] Production/Deployment - Milestones III to IV
[5] Operational and Support - Milestones IV to V

1-5b. System Name:_____

I was [1] assigned as a [1] program manager.
[2] acting [2] project manager.
[3] product manager.

I reported to: [1] an AMC Major Subordinate Command.
[2] another PM.
[3] a Program Executive Officer.
[4] directly to the Army Acquisition Executive.

1-5b. (Continued)

I managed the program during the following life cycle phases (Check all that apply):

[1] Concept Exploration Definition - Milestones 0 to I
[2] Concept Demonstration Validation - Milestones I to II
[3] Full Scale Development - Milestones II to III
[4] Production/Deployment - Milestones III to IV
[5] Operational and Support - Milestones IV to V

1-5c. System Name:_____

I was [1] assigned as a [1] program manager.
[2] acting [2] project manager.
[3] product manager.

I reported to:
[1] an AMC Major Subordinate Command.
[2] another PM.
[3] a Program Executive Officer.
[4] directly to the Army Acquisition Executive.

I managed the program during the following life cycle phases (Check all that apply):

[1] Concept Exploration Definition - Milestones 0 to I
[2] Concept Demonstration Validation - Milestones I to II
[3] Full Scale Development - Milestones II to III
[4] Production/Deployment - Milestones III to IV
[5] Operational and Support - Milestones IV to V

1-5d. System Name:_____

I was [1] assigned as a [1] program manager.
[2] acting [2] project manager.
[3] product manager.

I reported to:
[1] an AMC Major Subordinate Command.
[2] another PM.
[3] a Program Executive Officer.
[4] directly to the Army Acquisition Executive.

I managed the program during the following life cycle phases (Check all that apply):

[1] Concept Exploration Definition - Milestones 0 to I
[2] Concept Demonstration Validation - Milestones I to II
[3] Full Scale Development - Milestones II to III
[4] Production/Deployment - Milestones III to IV
[5] Operational and Support - Milestones IV to V

2. The present Army acquisition system was established in response to the recommendations of the President's Blue Ribbon Commission on Defense Management (The Packard Commission) and subsequent implementing directives and Public Law.

2-1. How much of the Packard Commission Report, A Quest for Excellence, Final Report to the President by the President's Blue Ribbon Commission on Defense Management, have you read?

[1] The entire report
[2] Excerpts from the report
[3] Commentary about the report, but not the report
[4] None of the above

2-2 a. Did the Packard Commission Report correctly identify the Army's deficiencies in system acquisition and development?

[1] Not at all
[2] To some degree
[3] To a large degree
[4] Completely
[5] Don't know/not familiar with the report

b. Do the current Army policies and procedures for system acquisition and development effectively correct the deficiencies identified by the Packard Commission?

[1] Not at all
[2] To some degree
[3] To a large degree
[4] Completely
[5] Don't know/not familiar with the report

c. Please explain:

3. For each of the following statements, place an "X" in the box over the number that indicates the degree to which you agree or disagree. Please use the following scale:

STRONGLY AGREE [1]	MODERATELY AGREE [2]	NEITHER (NEUTRAL) [3]	MODERATELY DISAGREE [4]	STRONGLY DISAGREE [5]

3-1. Army PMs have clear program responsibility. [1] [2] [3] [4] [5]

3-2. Army PMs have an ambiguous chain of command. [1] [2] [3] [4] [5]

3-3. Army PMs may freely accept proposals presented by interest groups outside their chain of command. [1] [2] [3] [4] [5]

3-4. Army PMs may freely reject proposals presented by interest groups outside their chain of command. [1] [2] [3] [4] [5]

3-5. Army PEOs have clear authority to resolve conflicts. [1] [2] [3] [4] [5]

3-6. At the outset of the program, the PM does enter into an agreement or "contract" with the PEO on specifics of system performance, schedule and cost. [1] [2] [3] [4] [5]

3-7. If the PM lives by the "contract", the PEO gives him strong management support throughout the life of the program. [1] [2] [3] [4] [5]

3-8. The PM's reporting requirements are only to his PEO. [1] [2] [3] [4] [5]

3-9. The PM's reporting requirements are on a "management-by-exception" basis. [1] [2] [3] [4] [5]

3-10. The PM has complete authority in selecting his staff. [1] [2] [3] [4] [5]

3-11. The PM's staff spends their time managing the program. [1] [2] [3] [4] [5]

3-12. The PM's staff spends their time selling the program. [1] [2] [3] [4] [5]

3-13. The PM's staff spends their time defending the program. [1] [2] [3] [4] [5]

3-14. The PM always establishes a dialogue with the customer or user at the conception of the program. [1] [2] [3] [4] [5]

For each of the following statements, place an "X" in the box over the number that indicates the degree to which you agree or disagree. Please use the following scale:

STRONGLY AGREE [1]	MODERATELY AGREE [2]	NEITHER (NEUTRAL) [3]	MODERATELY DISAGREE [4]	STRONGLY DISAGREE [5]

3-15. The PM maintains communication with the customer or user throughout the program. [1] [2] [3] [4] [5]

3-16. When developmental problems arise, performance trade-offs are made with the user's concurrence. [1] [2] [3] [4] [5]

3-17. The PM is motivated to seek out and address problems, rather than hide them. [1] [2] [3] [4] [5]

3-18. Prototype hardware of systems or subsystems involving unproven technology are tested under simulated operational conditions before final design approval or authorization for production. [1] [2] [3] [4] [5]

3-19. Meeting system performance requirements is the most important factor in making programmatic decisions. [1] [2] [3] [4] [5]

3-20. Maintaining the program schedule is the most important factor in making programmatic decisions. [1] [2] [3] [4] [5]

3-21. Staying within budget is the most important factor in making programmatic decisions. [1] [2] [3] [4] [5]

3-22. Pre-production military testing is a valuable aid to ensuring a successful program. [1] [2] [3] [4] [5]

Use the following space to provide illustrative examples or comments relative to questions 3-1 through 3-22. Please reference specific questions by number. You may attach as many additional sheets as necessary.

Additional space for illustrative examples or comments.

4. This question is for MILITARY RESPONDENTS ONLY. Civilian respondents please skip to the next page.

The following question asks for information that will be used, in conjunction with the other questions on this questionnaire, to statistically evaluate the Army's PM system as a function of the PM's perceived (rated) performance. Completion of this question is completely voluntary. If you elect not to answer this question, please skip to the next page. However, without your support in providing this data, I can not fully answer all the issues this study has set out to address. You have my assurance that the information you provide will be kept totally anonymous and used only for statistical analysis.

From each OER you received as a PM, please provide the rater's performance and potential evaluations (PART V, blocks b and d) and the senior rater's potential evaluation (PART VII, block a) in the spaces below. Please enter the most recent as OER 1. If you received more than five OERs as a PM, please enter the most recent five. If it is more convenient, or if you feel that the narrative adds insight important to this study, you may attach a xerographic copy of the back of the OER(s) in lieu of transcribing them to the questionnaire.

	OER 1	OER 2	OER 3	OER 4	OER 5
Performance during the rating period:					
Always exceeds requirements	[1]	[1]	[1]	[1]	[1]
Usually exceeds requirements	[2]	[2]	[2]	[2]	[2]
Met requirements	[3]	[3]	[3]	[3]	[3]
Often failed requirements	[4]	[4]	[4]	[4]	[4]
Usually failed requirements	[5]	[5]	[5]	[5]	[5]
This officer's potential for promotion to the next higher grade is:					
Promote ahead of contemporaries	[1]	[1]	[1]	[1]	[1]
Promote with contemporaries	[2]	[2]	[2]	[2]	[2]
Do not promote	[3]	[3]	[3]	[3]	[3]
Other	[4]	[4]	[4]	[4]	[4]
Senior Rater Potential Evaluation:					
!	[1]	[1]	[1]	[1]	[1]
!!	[2]	[2]	[2]	[2]	[2]
!!!!	[3]	[3]	[3]	[3]	[3]
!!!!!!!!!!!!!	[4]	[4]	[4]	[4]	[4]
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!					
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!	[5]	[5]	[5]	[5]	[5]
!!!!!!!!!!!!!	[6]	[6]	[6]	[6]	[6]
!!!!	[7]	[7]	[7]	[7]	[7]
!!	[8]	[8]	[8]	[8]	[8]
!	[9]	[9]	[9]	[9]	[9]

Appendix III

Compendium of Data

Population and Sample Demographics

Summary of Questionnaire Responses

The full data set is available on magnetic media at the US Army War College Library.

SECTION I
DEMOGRAPHICS

Identification of the Sample

1.	Personnel Assignments to Program/Project/Product Manager (PM) positions (June, 1986 to November, 1990):	501
2.	Number of personnel assigned more than once:	35
3.	Total population of individuals serving as PMs from June, 1986 to November, 1990 (line 1 - line 2):	466
4.	Number of personnel retired, separated from service, or with unknown whereabouts:	148
5	Survey population (line 3 - line 4):	318
6	Percentage of total population in survey population:	68.24%

Comparison of the Sample Responding, Survey Population, and Total Population

Question 1-1. What is your current rank?

	Total Population[1]	Survey Population Number	Survey Population % of Total	Sample Responding Number	Sample Responding % of Survey
Military Rank - CPT	2	1	0.4%	0	0.0%
MAJ	12	10	2.1%	3	0.9%
LTC	160	114	24.4%	79	24.8%
COL	170	113	24.2%	94	29.6%
BG	16	14	3.0%	9	2.8%
MG	5	5	1.1%	7	2.2%
LTG	1	1	0.2%	0	0.0%
UNKNOWN	1				
Military Subtotal	367	258	55.4%	192	60.4%[2]
Civilian Subtotal	99	60	12.8%	33	10.4%
Total	466	318	68.2%	225	70.8%

NOTES:

1. The total population is as identified by the Army Acquisition Executive Support Agency. The survey population is that portion of the total population to whom questionnaires were distributed.
2. Subtotal does not equal the sum of the rank values because of rounding.

Demographics of the Sample Responding

Question 1-2. When did you last serve as a PM?

	1986	1987	1988	1989	1990	Present
Military Rank - CPT						
MAJ		1		1	1	
LTC		2	2	3	5	67
COL		2	2	7	12	71
BG		1	3	1	1	3
MG	1	1	1		2	2
LTG						
Military Subtotal	1	7	8	12	21	143
Civilian Subtotal	1	2	2	1	1	26
Total	2	9	10	13	22	169
Percent of Sample	0.9%	4.0%	4.4%	5.8%	9.8%	75.1%

Question 1-3. How many times have you been a PM or acting PM?

	1	2	3	4	5 or More
Military Rank - CPT					
MAJ	2	1			
LTC	58	19	2		
COL	55	20	16	3	
BG	6	3			
MG	5	2			
LTG					
Military Subtotal	126	45	18	3	0
Civilian Subtotal	18	10	2	2	1
Total	144	55	20	5	1
Percent of Sample	64.9%	24.4%	8.9%	2.2%	0.4%

Average (mean) of all responses: 1.5 times

Integration of Questions 1-2 and 1-3.

	1986	1987	1988	1989	1990	Present	Total
One Time	2	4	8	8	13	109	144
Two Times		3	1	4	7	40	55
Three Times		1		1	2	16	20
Four Times			1			4	5
Five or More		1					1
Total	2	9	10	13	22	169	225

Question 1-4. How many OERs have you received as a PM?

		1	2	3	4	5 or More
Military Rank -	CPT					
	MAJ	1	1	1		
	LTC	22	19	12	8	2
	COL	12	15	17	10	29
	BG	1	3	2		3
	MG			1	1	3
	LTG					
Total		36	38	33	19	37
Percentage of Military Respondents		22.1%	23.3%	20.2%	11.7%	22.7%

Average (mean) of all military respondents: 2.9 OERs

NOTE: This question received a mixed response from the civilian respondents. Responses included: a number, (often annotated as civilian performance appraisals); an "N/A", (often with the observation that civilians do not receive Officer Evaluation Reports (OERs)); or no response at all, (question left blank). Because of the non-uniformity in response, all civilian respondents were recorded as *none*.

Integration of Questions 1-2 and 1-4.

	1986	1987	1988	1989	1990	Present	Total
Less than 1 Year						28	28
1 Year		1		2		33	36
2 Years		2	2	4	1	29	38
3 Years		2	3	2	8	18	33
4 Years			1	2	4	12	19
5 or More Years		2	2	2	8	23	37

NOTE: Data for military respondents only.

Integration of Questions 1-3 and 1-4.

	1 Time	2 Times	3 Times	4 Times	5 or More Times
Less than 1 Year	28				
1 Year	35	1			
2 Years	27	11			
3 Years	21	11	1		
4 Years	6	10	3		
5 or More Years	8	12	14	3	

NOTE: Data for military respondents only.

Question 1-5. Were you a Program, Project, or Product Manager?

	MAJ	LTC	COL	BG	MG	LTG	DAC	TOTAL
Program - -			11	4	2		3	20
Program - Project -			2	1	2			5
Program - - Product		2	1					3
Program - Project - Product			2					2
- Project -		2	51	3	2		12	70
- Project - Product		2	21	1			5	29
- - Product	3	73	6		1		13	96
TOTALS	3	79	94	9	7	0	33	225

Question 1-5a. Were you assigned or acting in a PM position.

	Assigned			Acting			No Response		
	Mil	DAC	Total	Mil	DAC	Total	Mil	DAC	Total
TOTALS	148	18	166	28	11	39	32	8	40

Question 1-5c. I reported to:
[1] an AMC Major Subordinate Command.
[2] another PM.
[3] a Program Executive Officer.
[4] directly to the Army Acquisition Executive.

	Army MC or MSC	PM	PEO	AAE	Other[1]
Program Manager	7	1	13	3	7
Project Manager	33	8	79		1
Product Manager	27	86	30	1	1
Total[2]	67	95	122	4	9
Percent of Sample	22.6%	32.0%	41.1%	1.3%	3.0%

NOTES:

1. Review of the responses received indicated that this question was incorrectly worded. Response number one read: *an AMC Major Subordinate Command.* It should have read *an Army Major or Major Subordinate Command.* Several respondents wrote in other Army commands, which were coded as *Army Major Command (MC) or Major Subordinate Command (MSC).* Other write-ins were coded as *Other.*
2. The total responses to this question are greater than the total number of survey respondents because some respondents held more than one PM position.

Question 1-5d. I managed the program during the following life cycle phases (Check all that apply):[1]

[1] Concept Exploration Definition - Milestones 0 to I
[2] Concept Demonstration Validation - Milestones I to II
[3] Full Scale Development - Milestones II to III
[4] Production/Deployment - Milestones III to IV
[5] Operational and Support - Milestones IV to V

	[1] 0 to I	[2] I to II	[3] II to III	[4] III to IV	[5] IV to V
Total[2]	77	113	148	159	100
Percent of Sample	34.2%	50.2%	65.8%	70.7%	44.4%

Number of life cycle phases checked by each respondent.

	None	One	Two	Three	Four	All Five
Total[2]	7	119	82	51	27	34
Percent of Sample	3.1%	52.9%	36.4%	22.7%	12.0%	15.1%

NOTES:

1. Most respondents checked more than one life cycle phase, many checked all five.
2. The total responses to this question are greater than the total number of survey respondents because some respondents held more than one PM position.

SECTION II
KNOWLEDGE OF THE PACKARD COMMISSION REPORT

Question 2-1. How much of the Packard Commission Report, A Quest for Excellence, Final Report to the President by the President's Blue Ribbon Commission on Defense Management, have you read?

[1] The entire report
[2] Excerpts from the report
[3] Commentary about the report, but not the report
[4] None of the above

Total in sample responding: 224 Percent of sample responding: 70.4%

	[1] Entire Report	[2] Excerpts	[3] Commentary	[4] None
Frequency Distribution	73	115	25	11
Percent of Responses	32.6%	51.3%	11.2%	4.9%

Question 2-2a. Did the Packard Commission Report correctly identify the Army's deficiencies in system acquisition and development?

[1] Not at all
[2] To some degree
[3] To a large degree
[4] Completely
[5] Don't know/not familiar with the report

Total in sample responding: 218 Percent of sample responding: 68.6%

	[1] Not at All	[2] Some	[3] Largely	[4] Completely	[5] Don't Know
Frequency	2	63	135	1	17
Percent	0.9%	28.9%	61.9%	0.5%	7.8

Average of responses for *Not at All* (1) to *Completely* (4):
Mean: 2.67 Standard Deviation: 0.50

Number of responses with supporting comments (question 2-2c).

	[1] Not at All	[2] Some	[3] Largely	[4] Completely	[5] Don't Know
Frequency	2	36	96	1	3
Percent	1.4%	26.1%	69.6%	0.7%	2.2

Average of responses for *Not at All* (1) to *Completely* (4):
Mean: 2.71 Standard Deviation: 0.50

Comparison of questions 2-1 and 2-2a.

	Question 2-2a					
Question 2-1	[0] No Answer	[1] Not at All	[2] Some	[3] Largely	[4] Completely	[5] Don't Know
[1] Entire Report		1	21	51		
[2] Excerpts	3	1	32	77	1	1
[3] Commentary	1		10	6		8
[4] Not at All	2			1		8

Question 2-2b. Do the current Army policies and procedures for system acquisition and development effectively correct the deficiencies identified by the Packard Commission?

[1] Not at all
[2] To some degree
[3] To a large degree
[4] Completely
[5] Don't know/not familiar with the report

Total in sample responding: 217 Percent of sample responding: 68.2%

	[1] Not at All	[2] Some	[3] Largely	[4] Completely	[5] Don't Know
Frequency	9	125	64	1	18
Percent	4.1%	57.6%	29.5%	0.5%	8.3

Average of responses for *Not at All* (1) to *Completely* (4):
Mean: 2.29 Standard Deviation: 0.55

Number of responses with supporting comments (question 2-2c).

	[1] Not at All	[2] Some	[3] Largely	[4] Completely	[5] Don't Know
Frequency	7	92	35		3
Percent	5.1%	67.2%	25.5%	0.0%	2.2

Average of responses for *Not at All* (1) to *Completely* (4):
Mean: 2.21 Standard Deviation: 0.50

Comparison of questions 2-1 and 2-2b.

		Question 2-2b				
Question 2-1	[0] No Answer	[1] Not at All	[2] Some	[3] Largely	[4] Completely	[5] Don't Know
[1] Entire Report	1	4	43	25		
[2] Excerpts	3	5	68	37		2
[3] Commentary	1		13	2	1	8
[4] Not at All	2		1			8

SECTION III
THE ACQUISITION MODEL

Question 3-1. Army PMs have clear program responsibility.

Total in sample responding: 222 Percent of sample responding: 69.8%

Average response (mean): 1.81 Standard Deviation: 0.96

Data Summary	[1] STRONGLY AGREE	[2] MODERATELY AGREE	[3] NEITHER (NEUTRAL)	[4] MODERATELY DISAGREE	[5] STRONGLY DISAGREE
Frequency	96	98	6	18	4
Percent	43.2%	44.1%	2.7%	8.1%	1.8%

Question 3-2. Army PMs have an ambiguous chain of command.

Total in sample responding: 221 Percent of sample responding: 69.5%

Average response (mean): 3.76 Standard Deviation: 1.40

Data Summary	[1] STRONGLY AGREE	[2] MODERATELY AGREE	[3] NEITHER (NEUTRAL)	[4] MODERATELY DISAGREE	[5] STRONGLY DISAGREE
Frequency	21	39	6	61	94
Percent	9.5%	17.6%	2.7%	27.6%	42.5%

Question 3-3. Army PMs may freely accept proposals presented by interest groups outside their chain of command.

Total in sample responding: 218 Percent of sample responding: 68.6%

Average response (mean): 2.83 Standard Deviation: 1.19

Data Summary	[1] STRONGLY AGREE	[2] MODERATELY AGREE	[3] NEITHER (NEUTRAL)	[4] MODERATELY DISAGREE	[5] STRONGLY DISAGREE
Frequency	23	83	42	48	22
Percent	10.6%	38.1%	19.3%	22.0%	10.1%

Question 3-4. Army PMs may freely reject proposals presented by interest groups outside their chain of command.

Total in sample responding: 218 Percent of sample responding: 68.6%

Average response (mean): 2.69 Standard Deviation: 1.15

Data Summary	[1] STRONGLY AGREE	[2] MODERATELY AGREE	[3] NEITHER (NEUTRAL)	[4] MODERATELY DISAGREE	[5] STRONGLY DISAGREE
Frequency	27	93	34	49	15
Percent	12.4%	42.7%	15.6%	22.5%	6.9%

Question 3-5. Army PEOs have clear authority to resolve conflicts.

Total in sample responding: 217 Percent of sample responding: 68.2%

Average response (mean): 2.19 Standard Deviation: 1.12

Data Summary	[1] STRONGLY AGREE	[2] MODERATELY AGREE	[3] NEITHER (NEUTRAL)	[4] MODERATELY DISAGREE	[5] STRONGLY DISAGREE
Frequency	63	97	19	29	9
Percent	29.0%	44.7%	8.8%	13.4%	4.1%

Question 3-6. At the outset of the program, the PM does enter into an agreement or "contract" with the PEO on specifics of system performance, schedule and cost.

Total in sample responding: 219 Percent of sample responding: 68.9%

Average response (mean): 2.32 Standard Deviation: 1.18

Data Summary	[1] STRONGLY AGREE	[2] MODERATELY AGREE	[3] NEITHER (NEUTRAL)	[4] MODERATELY DISAGREE	[5] STRONGLY DISAGREE
Frequency	59	85	37	22	16
Percent	26.9%	38.8%	16.9%	10.0%	7.3%

Question 3-7. If the PM lives by the "contract", the PEO gives him strong management support throughout the life of the program.

Total in sample responding: 214 Percent of sample responding: 67.3%

Average response (mean): 2.30 Standard Deviation: 1.16

Data Summary	[1] STRONGLY AGREE	[2] MODERATELY AGREE	[3] NEITHER (NEUTRAL)	[4] MODERATELY DISAGREE	[5] STRONGLY DISAGREE
Frequency	64	68	47	24	11
Percent	29.9%	31.8%	22.0%	11.2%	5.1%

Question 3-8. The PM's reporting requirements are only to his PEO.

Total in sample responding: 218 Percent of sample responding: 68.6%

Average response (mean): 3.88 Standard Deviation: 1.27

Data Summary	[1] STRONGLY AGREE	[2] MODERATELY AGREE	[3] NEITHER (NEUTRAL)	[4] MODERATELY DISAGREE	[5] STRONGLY DISAGREE
Frequency	12	37	7	71	91
Percent	5.5%	17.0%	3.2%	32.6%	41.7%

Question 3-9. The PM's reporting requirements are on a "management-by-exception" basis.

Total in sample responding: 219 Percent of sample responding: 68.9%

Average response (mean): 3.37 Standard Deviation: 1.29

Data Summary	[1] STRONGLY AGREE	[2] MODERATELY AGREE	[3] NEITHER (NEUTRAL)	[4] MODERATELY DISAGREE	[5] STRONGLY DISAGREE
Frequency	14	60	29	63	53
Percent	6.4%	27.4%	13.2%	28.8%	24.2%

Question 3-10. The PM has complete authority in selecting his staff.

Total in sample responding: 220 Percent of sample responding: 69.2%

Average response (mean): 3.53 Standard Deviation: 1.41

Data Summary	[1] STRONGLY AGREE	[2] MODERATELY AGREE	[3] NEITHER (NEUTRAL)	[4] MODERATELY DISAGREE	[5] STRONGLY DISAGREE
Frequency	23	45	19	58	75
Percent	10.5%	20.5%	8.6%	26.4%	34.1%

Question 3-11. The PM's staff spends their time managing the program.

Total in sample responding: 222 Percent of sample responding: 69.8%

Average response (mean): 2.60 Standard Deviation: 1.19

Data Summary	[1] STRONGLY AGREE	[2] MODERATELY AGREE	[3] NEITHER (NEUTRAL)	[4] MODERATELY DISAGREE	[5] STRONGLY DISAGREE
Frequency	28	118	9	49	18
Percent	12.6%	53.2%	4.1%	22.1%	8.1%

Question 3-12. The PM's staff spends their time selling the program.

Total in sample responding: 222 Percent of sample responding: 69.8%

Average response (mean): 2.76 Standard Deviation: 1.06

Data Summary	[1] STRONGLY AGREE	[2] MODERATELY AGREE	[3] NEITHER (NEUTRAL)	[4] MODERATELY DISAGREE	[5] STRONGLY DISAGREE
Frequency	18	95	40	61	8
Percent	8.1%	42.8%	18.0%	27.5%	3.6%

Question 3-13. The PM's staff spends their time defending the program.

Total in sample responding: 222 Percent of sample responding: 69.8%

Average response (mean): 1.88 Standard Deviation: 0.78

Data Summary	[1] STRONGLY AGREE	[2] MODERATELY AGREE	[3] NEITHER (NEUTRAL)	[4] MODERATELY DISAGREE	[5] STRONGLY DISAGREE
Frequency	67	127	16	11	1
Percent	30.2%	57.2%	7.2%	5.0%	0.5%

Question 3-14. The PM always establishes a dialogue with the customer or user at the conception of the program.

Total in sample responding: 222 Percent of sample responding: 69.8%

Average response (mean): 1.88 Standard Deviation: 1.02

Data Summary	[1] STRONGLY AGREE	[2] MODERATELY AGREE	[3] NEITHER (NEUTRAL)	[4] MODERATELY DISAGREE	[5] STRONGLY DISAGREE
Frequency	91	98	10	15	8
Percent	41.0%	44.1%	4.5%	6.8%	3.6%

Question 3-15. The PM maintains communication with the customer or user throughout the program.

Total in sample responding: 223 Percent of sample responding: 70.1%

Average response (mean): 1.45 Standard Deviation: 0.68

Data Summary	[1] STRONGLY AGREE	[2] MODERATELY AGREE	[3] NEITHER (NEUTRAL)	[4] MODERATELY DISAGREE	[5] STRONGLY DISAGREE
Frequency	137	79	2	3	2
Percent	61.4%	35.4%	0.9%	1.3%	0.9%

Question 3-16. When developmental problems arise, performance trade-offs are made with the user's concurrence.

Total in sample responding: 220 Percent of sample responding: 69.2%

Average response (mean): 1.90 Standard Deviation: 0.90

Data Summary	[1] STRONGLY AGREE	[2] MODERATELY AGREE	[3] NEITHER (NEUTRAL)	[4] MODERATELY DISAGREE	[5] STRONGLY DISAGREE
Frequency	82	98	22	17	1
Percent	37.2%	44.5%	10.0%	7.7%	0.5%

Question 3-17. The PM is motivated to seek out and address problems, rather than hide them.

Total in sample responding: 223 Percent of sample responding: 70.1%

Average response (mean): 1.98 Standard Deviation: 1.08

Data Summary	[1] STRONGLY AGREE	[2] MODERATELY AGREE	[3] NEITHER (NEUTRAL)	[4] MODERATELY DISAGREE	[5] STRONGLY DISAGREE
Frequency	91	81	19	28	4
Percent	40.8%	36.3%	8.5%	12.6%	1.8%

Question 3-18. Prototype hardware of systems or subsystems involving unproven technology are tested under simulated operational conditions before final design approval or authorization for production.

Total in sample responding: 220 Percent of sample responding: 69.2%

Average response (mean): 2.05 Standard Deviation: 0.98

Data Summary	[1] STRONGLY AGREE	[2] MODERATELY AGREE	[3] NEITHER (NEUTRAL)	[4] MODERATELY DISAGREE	[5] STRONGLY DISAGREE
Frequency	71	92	36	17	4
Percent	32.3%	41.8%	16.4%	7.7%	1.8%

Question 3-19. Meeting system performance requirements is the most important factor in making programmatic decisions.

Total in sample responding: 223 Percent of sample responding: 70.1%

Average response (mean): 2.77 Standard Deviation: 1.18

Data Summary	[1] STRONGLY AGREE	[2] MODERATELY AGREE	[3] NEITHER (NEUTRAL)	[4] MODERATELY DISAGREE	[5] STRONGLY DISAGREE
Frequency	26	93	27	61	16
Percent	11.7%	41.7%	12.1%	27.4%	7.8%

Question 3-20. Maintaining the program schedule is the most important factor in making programmatic decisions.

Total in sample responding: 223 Percent of sample responding: 70.1%

Average response (mean): 3.11 Standard Deviation: 1.23

Data Summary	[1] STRONGLY AGREE	[2] MODERATELY AGREE	[3] NEITHER (NEUTRAL)	[4] MODERATELY DISAGREE	[5] STRONGLY DISAGREE
Frequency	16	64	41	84	18
Percent	7.8%	28.7%	18.4%	37.7%	8.1%

Question 3-21. Staying within budget is the most important factor in making programmatic decisions.

Total in sample responding: 223 Percent of sample responding: 70.1%

Average response (mean): 2.56 Standard Deviation: 1.09

Data Summary	[1] STRONGLY AGREE	[2] MODERATELY AGREE	[3] NEITHER (NEUTRAL)	[4] MODERATELY DISAGREE	[5] STRONGLY DISAGREE
Frequency	33	96	39	47	8
Percent	14.8%	43.0%	17.5%	21.1%	3.6%

Question 3-22. Pre-production military testing is a valuable aid to ensuring a successful program.

Total in sample responding: 221 Percent of sample responding: 69.5%

Average response (mean): 1.72 Standard Deviation: 0.78

Data Summary	[1] STRONGLY AGREE	[2] MODERATELY AGREE	[3] NEITHER (NEUTRAL)	[4] MODERATELY DISAGREE	[5] STRONGLY DISAGREE
Frequency	96	98	20	6	1
Percent	43.4%	44.3%	9.0%	2.7%	0.5%

SECTION IV
PM OFFICER EVALUATION REPORTS

Officers providing OER data: 160 Percent of Officers in Sample: 83.3%

Total number of OERs: 458 OERs per officer (mean number): 2.86

	Frequency	Percent
Performance during the rating period:		
Always exceeds requirements	458	100%
Usually exceeds requirements	0	0%
Met requirements	0	0%
Often failed requirements	0	0%
Usually failed requirements	0	0%
This officer's potential for promotion to the next higher grade is:		
Promote ahead of contemporaries	458	100%
Promote with contemporaries	0	0%
Do not promote	0	0%
Other	0	0%
Senior Rater Potential Evaluation:		
!	321	70.1%
!!	122	26.6%
!!!!	0	0%
!!!!!!!!!!!!!	0	0%
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!		
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!	0	0%
!!!!!!!!!!!!!	0	0%
!!!!	0	0%
!!	0	0%
!	0	0%
No Senior Rater Information	15	3.3%

Endnotes

1. The President's Blue Ribbon Commission on Defense Management, A Quest for Excellence, Final Report to the President, p. 49.

2. Ibid., p. 50.

3. U.S. Laws, Statutes, etc., United States Code, 1988, Vol. 18, Title 44, sec. 3506, p. 604.

4. dBASE III Plus is a registered trademark of Aston-Tate Corporation.

5. The President's Blue Ribbon Commission on Defense Management, p. 50.

6. Robert B. Tinsman, ed, Army Command and Management: Theory and Practice, pp. 17-13 - 17-14.

7. Ibid., p. 17-14.

8. Ibid., p. 17-16.

9. Ibid., p. 17-11.

10. Ibid., p. 17-16.

11. Ibid., pp. 17-5 - 17-6.

12. The President's Blue Ribbon Commission on Defense Management, p. 50.

13. Ibid., p. 59.

14. Ibid., p. 50.

15. Government Accounting Office, Acquisition Reform: DoD's Efforts to Streamline the Acquisition System and Reduce Personnel, p. 29.

16. The President's Blue Ribbon Commission on Defense Management, p. 50.

17. Ibid., pp. 50.

18. Ibid., pp. 50-51.

19. Ibid., pp. 44-48.

Bibliography

1. Government Accounting Office, Acquisition Reform: DoD's Efforts to Streamline the Acquisition System and Reduce Personnel, Case B221205, 1 November 1989, p. 29.

2. The President's Blue Ribbon Commission on Defense Management. A Quest for Excellence, Final Report to the President. Washington: June, 1986.

3. Tinsman, Robert B., ed. Army Command and Management: Theory and Practice. Carlisle: U.S. Army War College, 1990.

4. U.S. Laws, Statutes, etc., Public Law 433, 99th Cong., 1 October 1986. "Goldwater-Nichols Department of Defense Reorganization Act of 1986."

5. U.S. Laws, Statutes, etc., United States Code. 1988 ed. Washington: Government Printing Office, 1989. Vol. 18, Title 44, sec. 3506.